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The Role of Farmer Training Programs in Financial Literacy and Agricultural Productivity: An HRM Perspective

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Abstract

Farmer training programs are increasingly recognised as an important tool for agricultural human resource development, particularly in a complex, high-value farming environment exposed to climate and market risks. Traditional agricultural training has focused primarily on farming skills, inputs, crop management, and the adoption of new technologies and techniques. However, it has often given insufficient attention to financial skills, business planning, record-keeping, credit management, risk assessment, and strategic farm decision-making. This creates a gap between technical agricultural skills and the broader managerial capabilities required for sustainable farm performance. This study examines the role of farmer training programs in strengthening financial literacy, financial decision-making, farm management capabilities, and agricultural productivity from a human resource management (HRM) perspective. It views farmers as human capital whose knowledge, skills, attitudes, and decision-making capabilities can be developed through structured learning, extension, and institutional support. The study adopts a qualitative, interpretivist, exploratory, and documentary research design, drawing on secondary sources, including scholarly literature, institutional reports, policy documents, and program materials. The documentary evidence is analysed using qualitative thematic analysis to identify, organise, and interpret recurring themes. The reviewed evidence suggests that farmer training programs can strengthen financial knowledge, particularly when they include practical sessions on budgeting, cost recording, saving, access to credit, financial planning, and market-based decision-making. Participatory, context-specific, experiential, and advisory approaches, especially when linked to markets and financial resources, are more likely to support informed financial decisions and improved farm management. However, the reviewed evidence does not establish a definite or consistent causal relationship between training participation and productivity. Rather, training outcomes appear to depend on program quality, farmers' characteristics, institutional support, access to inputs and credit, and the integration of financial education into agricultural extension systems. From an HRM perspective, this highlights the importance of needs-based curriculum design, trainer competence, continuous learning, performance support, and coordination among agricultural institutions, extension services, financial institutions, and policymakers. The study offers recommendations for farmer groups and trainers on integrating financial literacy and managerial competency development into farmer-capacity-building initiatives. It also emphasises the need

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for comprehensive interventions rather than treating productivity solely as a technical outcome. Its contribution lies in bringing together HRM and human resource development perspectives with research on financial literacy and agricultural productivity. The study provides a conceptual foundation for future research and practice aimed at developing an agricultural workforce that is financially capable, managerially competent, and productive through farmer training as a strategic human-capital-development intervention.
Keywords: farmer training programs; financial literacy; agricultural productivity; human resource management; farm management; agricultural extension; human capital development

1. Introduction

Agriculture remains important to economic development, livelihoods, employment, food security, and the sustainable use of natural resources. It provides income and raw materials and contributes to the stability and development of local economies, particularly for communities vulnerable to climate variability and market fluctuations. In many developing and emerging economies, farmers' competencies are an important component of food-system performance and household well-being. Smallholder and family farms also play a significant role in agricultural production. At the same time, agriculture is becoming increasingly knowledge-intensive. Farmers must be equipped to use new technologies, respond to environmental pressures and market demand, meet quality requirements, and manage economic pressures. Technical skills in crop and animal husbandry, soil management, and machinery operation are therefore no longer sufficient on their own; farmers also need financial, managerial, entrepreneurial, and decision-making skills.

Agriculture is a multifaceted enterprise, and the role of the modern farmer has changed. Farmers are expected to use limited resources efficiently, evaluate investment opportunities, plan credit and savings, maintain records, interpret market information, adopt appropriate technologies, and respond to climatic and economic risks. These responsibilities require more than technical expertise. Although a farmer may have sound knowledge of good agronomic practices, their ability to assess enterprise profitability, distinguish productive from non-productive expenditure, plan cash flow, arrange credit, or respond to price changes may be limited. Agricultural workforce training should therefore extend beyond production techniques to include financial management, business planning, risk management, and informed decision-making.

One way to build these capabilities is through farmer training programs. In HRM, training is a planned and structured activity designed to enhance knowledge, skills, and attitudes and, in turn, improve performance. Agricultural training may be delivered through farmer field schools, cooperative programs, demonstrations, digital learning platforms, and training offered by financial institutions. These interventions can also be understood as human resource development (HRD), because they aim to build human capital, strengthen capabilities, transfer knowledge, support continuous learning, and improve the performance of farm enterprises.

HRM and HRD provide useful perspectives for analysing farmer training because both address the systematic development of people as a resource for organisational and economic performance. Organisations traditionally use training to align employees' skills with organisational goals, improve productivity, and encourage innovation. A similar approach can be applied to agriculture: farmers are a key human resource within the agricultural system, and their knowledge and skills can influence the efficiency, sustainability, and profitability of farming activities. Training programs should therefore be designed not merely as demonstrations of technical practices, but as progressive learning processes that develop practical skills, problem-solving abilities, and the capacity to apply knowledge across different production and market conditions.

This understanding of farmer development is particularly important in relation to financial literacy. Financial literacy refers to the knowledge, skills, attitudes, and confidence needed to make informed financial decisions. In agriculture, it includes budgeting, saving, the effective use of financial resources, cash-flow planning, investment appraisal, risk assessment, and money management. Financial literacy helps farmers understand production costs, returns, debt obligations, and seasonal income patterns, enabling them to make informed decisions about inputs, equipment, labour, and production outputs. Some studies suggest that financial literacy is associated with the use of more comprehensive management-accounting systems, farmers' borrowing practices, and profitability. Research on rice farming has also identified associations between financial performance, financial training, and financial extension activities.

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Financial literacy involves more than numerical skills or knowledge of banking products. It also requires farmers to interpret financial information in the context of their farms, including fluctuations in output and input prices, seasonal cash flow, market risks, and household financial obligations. Even basic records of input costs, selling prices, debts, and savings can help farmers make better-informed decisions about expanding production, irrigation, seed upgrades, and changes in farming practices. Understanding credit terms can also help farmers avoid unnecessary borrowing and use finance productively rather than reactively. Financial literacy is therefore a managerial competency linked to farm-production choices and economic outcomes.

The conceptual links between training, financial literacy, and agricultural productivity are important, but they are neither necessarily direct nor automatic. Training can improve production practices, resource allocation, technology use, pest and disease management, post-harvest practices, and market engagement. Learning may support productivity through more informed decision-making, better planning, and more efficient use of available resources. Agricultural extension and training have been associated with improved farm production in some contexts. However, productivity is also affected by access to land, water, inputs, credit, infrastructure, markets, technology, institutional support, and favourable environmental conditions. Structural barriers, such as inadequate irrigation, poor roads, weak market linkages, and high input prices, cannot be resolved through training alone.

This study addresses a conceptual and scholarly gap by integrating farmer training, financial literacy, agricultural productivity, and HRM perspectives. Much of the existing literature examines agricultural training and extension in relation to technology adoption, agricultural output, or earnings, while financial literacy is often studied separately in relation to credit access, savings, or household welfare. Similarly, HRM and HRD scholarship has developed models of training, competency development, learning, and performance improvement, but these perspectives have not been widely applied to the financial and managerial development of farmers. There is limited conceptual clarity about how financial training programs can develop farmers' financial skills and how those skills relate to farm management and productivity. This study addresses that gap by treating financial literacy not only as a financial concern but also as a component of agricultural human capital.

This study uses a qualitative, interpretivist, exploratory, and documentary research approach. It examines secondary sources, including academic publications, institutional reports, policy documents, and training-program materials, to analyse how farmer training programs are represented in relation to financial literacy, farm management, and productivity. Qualitative thematic analysis is used to identify patterns, interpret meaning, and develop an overall understanding of the relationships among training, financial capability, managerial practice, and agricultural performance. This approach is appropriate because the study does not seek to estimate statistical relationships or test causal effects; rather, it aims to develop a conceptual understanding.

The following research objectives guide the study:

- To examine how farmer training can be understood from an HRM and HRD perspective.
- To explore the role of training in farmers' financial literacy and financial decision-making.
- To examine the relationship between financial skills and agricultural management (farm-management) activities.
- To critically analyse the role of training and financial education in agricultural productivity.
- To identify the barriers to and enabling factors for effective institutional farmer-capacity-development programs.

In line with these objectives, the study addresses the following research questions:

- How can farmer training be conceptualised as an HRM/HRD activity in agriculture?
- What impact may farmer training programs have on farmers' financial literacy and financial decision-making?
- How are financial skills related to farm management and resource-allocation decisions?
- What role do training and financial literacy play in agricultural productivity across different institutional and contextual settings?
- What barriers and enabling factors influence the success of farmer-capacity-development programs?

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The study has theoretical and practical implications. It brings a new perspective to HRM and HRD scholarship to agriculture, by adding two new elements: (1) farmers are learners; (2) farmers are human capital whose capacity is to be purposefully developed for agricultural development. It also embeds financial literacy in the conversation with agricultural training and productivity research so as to give a fuller picture on agricultural performance. The study implications are for agricultural institutions, agricultural extension departments, training institutions, financial organizations, cooperatives, and policy makers. It emphasizes learning and capacity development that integrates technical, financial, managerial and entrepreneurial components, the importance of extension systems as continuous learning and not a one-shot, and the importance of policies that connect capacity development and access to finance, markets, technology and institutional support.

The remainder of the article is structured as follows. The next section reviews the literature on farmer training, HRM and HRD, financial literacy, farm financial management, and agricultural productivity. The methodology section then explains the qualitative, interpretivist, exploratory, and documentary approach. This is followed by a thematic analysis and a discussion of the main findings. The implications for HRM practice, agricultural institutions and extension services, financial providers, and policymakers are then considered. Finally, the study presents its conclusions, limitations, and directions for future research.

2. Literature Review

2.1. The emphasis is on Human Resource Management and Human Resource Development in Agriculture

Traditionally, human resource management (HRM) has focused on strategically staffing, developing, motivating, and utilising human resources to support organisational performance. Human resource development (HRD) extends this focus through planned learning, competency development, career development, and continuous capacity building. The principles of HRM and HRD are relevant to agriculture, as well as to corporate and public-sector organisations. Farmers should be viewed not only as recipients of external advice but also as managers, entrepreneurs, risk-takers, and decision-makers whose knowledge, skills, and attitudes are important to the performance of farm enterprises.

This perspective can be understood through human capital theory. The theory proposes that investment in education, training, health, and skills can increase productivity and generate economic returns. In agriculture, human capital development includes formal education as well as technical knowledge, managerial skills, financial literacy, and adaptability. Studies of farmer training also view training as a process through which farmers acquire human capital, including practical skills and agricultural knowledge. However, human capital development does not automatically improve performance. Farmers must be able to apply what they learn, and this depends partly on supportive institutional, financial, and ecological conditions.

A complementary perspective is the resource-based view (RBV). According to RBV, organisations may gain advantages from resources that are valuable, rare, difficult to imitate, and effectively organised. Farmers' tacit knowledge, local experience, social networks, problem-solving abilities, and financial decision-making skills can be valuable resources for farming. Training can strengthen these resources when it develops competencies relevant to farmers' production systems and markets. However, a standardised train-the-trainer approach may not adequately address differences among farm types and local contexts.

HRD theory emphasises planned learning, competency building, and performance improvement. In agriculture, competency-based training should move beyond the transfer of technical information towards the development of integrated competencies, including problem diagnosis, information interpretation, planning, budgeting, evaluation of alternatives, and adaptation of practices. Continuous professional learning is particularly important because agriculture is affected by seasonality, climate variability, technological change, and market dynamics. Capacity building should therefore be understood not as a one-off event but as an ongoing process through which farmers develop confidence and competence.

2.2. Agricultural training programs and agricultural knowledge

Farmers receive training through a range of formal and informal approaches. Formal learning includes vocational agricultural training, short courses, certification programs, and institutionally organised workshops. Informal learning occurs through peer exchange, farmer-to-farmer extension, demonstration plots, community groups, cooperative learning, and practical experimentation. Agricultural extension services help address learning gaps by translating

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research findings into locally relevant advice. The literature generally suggests that participatory and context-specific approaches support meaningful learning, whereas one-way, lecture-based dissemination may provide fewer opportunities for active engagement.

One important experiential learning model is the farmer field school (FFS). Farmer field schools bring groups of farmers together to observe, discuss, experiment, and solve problems in practical settings. Research in South Africa has reported increased knowledge among smallholder livestock farmers participating in FFS-based study groups, along with stronger peer-to-peer knowledge exchange. This approach is consistent with experiential learning theory, which proposes that learning is strengthened when people have an experience, reflect on it, draw lessons, and apply those lessons in new contexts. This cycle is particularly relevant to practical, context-dependent agricultural knowledge.

Adult learning theory also highlights that farmers are experienced learners, not simply passive recipients of expert knowledge. Adult learners benefit from training that is relevant to their needs, builds on their prior experiences, encourages discussion, and provides opportunities to apply what they have learned. Farmer field schools and participatory extension approaches reflect these principles by allowing farmers to observe, experiment, discuss, and make decisions. By comparison, conventional training-and-visit methods may efficiently communicate standardised messages but may offer fewer opportunities for farmers to solve problems independently, develop confidence, and make adaptive decisions.

Digital training has opened new opportunities for delivering farmer education through mobile applications, web-based courses, videos, and virtual advice. Digital tools can improve access to learning materials, but they cannot fully replace facilitation, trust-building, demonstration, and social learning. Evidence from agricultural fintech peer-to-peer lending initiatives suggests that participation may improve farmers' financial reporting literacy, business planning, and financial risk management, although learning effects may be limited during the early stages of participation. Technology can therefore facilitate financial learning, provided that tools are usable and farmers have adequate digital literacy and ongoing institutional support.

In agriculture, financial literacy can be defined as the knowledge, attitudes, and behaviours associated with budgeting, saving, borrowing, credit management, record-keeping, investment planning, risk assessment, and resource allocation. Knowledge of financial products alone is insufficient; farmers must also understand and apply financial information when making farm-related decisions. They need to balance production investments with household consumption, manage irregular income, assess credit requirements, and respond to uncertainty in market prices and weather conditions.

Recent research has helped clarify the nature and dimensions of financial literacy among farmers. A study of dairy farmers found that a substantial proportion had low levels of financial literacy, particularly in relation to financial behaviour. Income, age, education, alternative livelihood sources, and the distance between farms and financial institutions were identified as relevant factors. In Albania, financial illiteracy was also identified as an obstacle to farmers' ability to meet financial commitments, use resources efficiently, access financial institutions, and improve farm performance. These findings suggest that financial literacy is socially and institutionally embedded and depends not only on individual ability but also on access to finance, financial services, education, and markets.

The literature recognises a role for financial education in strengthening financial literacy and supporting financial decision-making. Informed farmers may be better able to prepare budgets, distinguish productive expenditure from household consumption, assess credit options, maintain accounts, and plan investments. The reviewed evidence also suggests that financial knowledge may be associated with greater agricultural entrepreneurship. Fintech lending data further indicates that financial platforms may support farmers' financial literacy through financial reporting, business planning, and risk management. However, financial literacy alone does not guarantee financial autonomy or better decisions; affordable credit, secure land tenure, stable markets, and adequate infrastructure are also important.

A further question is whether financial literacy should be understood as an individual skill or as a relational capability. Individual-level studies focus on knowledge, attitudes, and behaviours, whereas institutional studies examine how training providers, cooperatives, financial institutions, and extension systems create opportunities for financial learning. The latter perspective is particularly relevant to HRM because it recognises that capability development depends on organisational support, incentives, access to information, and continuing learning opportunities.

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2.3. Farm Management Skills, Agricultural Productivity, and Financial Education

Financial skills support farm planning, cost analysis, comparisons among farm enterprises, resource allocation, and the calculation of returns. Budgeting and record-keeping help farmers understand where money is spent and earned. Financial plans can inform decisions about purchasing inputs, hiring labour and machinery, meeting irrigation requirements, arranging storage, and marketing produce. Financial education can therefore help connect production knowledge with economic decision-making.

Financial capability can also influence technology adoption and investment. Improved seeds, fertiliser, irrigation equipment, livestock, and digital solutions require investment and involve uncertainty and risk. Stronger financial competence may help farmers assess affordability, consider financing options, and align cash flow with investment decisions. Research linking financial literacy with agricultural entrepreneurship supports the possibility that financial knowledge is associated with greater entrepreneurial engagement. Nevertheless, financial literacy does not necessarily mean that farmers have sufficient liquidity. Farmers may understand financial principles but still face constraints such as insecure land access, weak market access, limited availability of quality inputs, and high interest rates.

This distinction is central to the study. Financial literacy can strengthen productivity potential by supporting planning, resource optimisation, and informed decision-making. However, actual productivity outcomes also depend on the wider production system. Soil quality, water availability, weather, input quality, access to technology, infrastructure, and institutional support all influence whether improved knowledge and confidence translate into higher productivity. Recent research on extension services similarly highlights the importance of implementation quality, contextual factors, and outcome assessment rather than assuming a direct relationship between training and yields. Productivity should therefore be understood as an outcome shaped by both farmers' capabilities and the conditions that enable them to apply those capabilities.

2.4. To identify research gaps and develop a conceptual synthesis

The literature reveals three important research gaps. First, agricultural training research has focused more heavily on technical knowledge and the adoption of practices than on financial literacy and managerial capabilities. Second, research on farmers' financial knowledge has largely examined financial literacy, financial behaviour, or household financial well-being, with less attention to training design, farm financial management, and productivity. Third, agricultural development research has not fully incorporated HRM and HRD perspectives, which could provide useful insights into learning facilitation, competency development, and performance improvement in agricultural organisations.

Although farmer training and financial and farm-management skills are widely recognised as important, the relationship among them remains insufficiently understood. Research may focus on individual knowledge and behaviour, institutional access, financial inclusion, participatory learning, or contextual conditions. A less explored question is how farmers' financial skills can be developed in ways that are practical, meaningful, and institutionally supported. Quantitative measures of literacy or productivity may not fully capture how farmers interpret financial information, solve problems, learn from peers, or apply knowledge in the field.

To address these gaps, the present study adopts a qualitative, interpretivist, exploratory, documentary, and HRM-oriented approach. It examines how farmer training programs are represented as instruments of human resource development, how they may develop financial competencies and decision-making capabilities, and how these competencies may interact with farm management and productivity. The study draws on human capital theory, the resource-based view, HRD theory, experiential learning theory, and adult learning theory to develop a conceptual framework that explains farmer training as a strategic approach to capability building. This approach supports a contextual understanding of how training may strengthen financial capabilities, management practices, and agricultural productivity.

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Figure 1 presents the conceptual framework guiding this study, showing farmer training as a strategic HRD capability-building process.

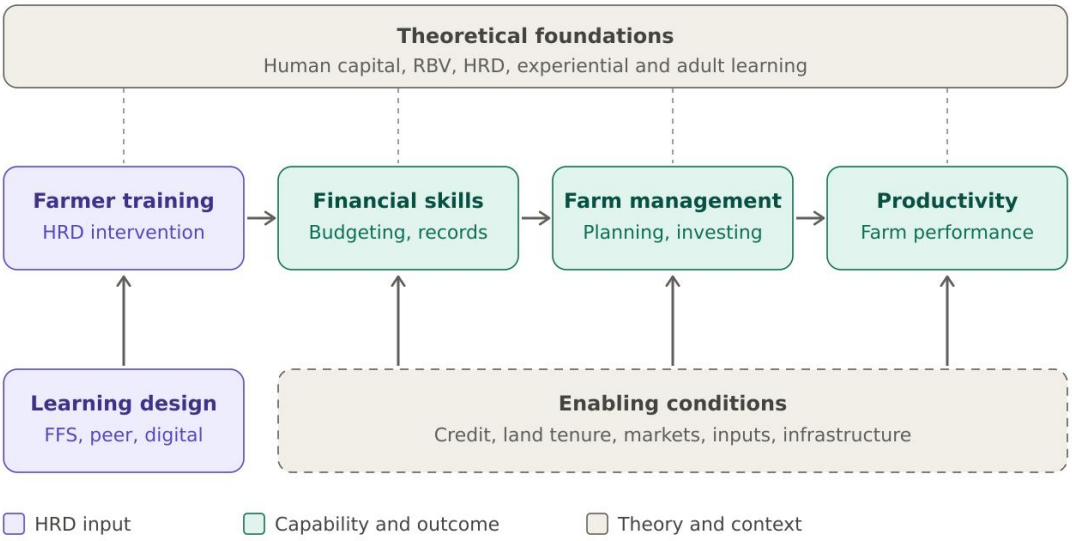


Figure 1: *Conceptual framework linking farmer training (HRD), financial competencies, farm management and productivity.*

3. Research Methodology

3.1. Research Philosophy

This study adopts an interpretivist approach. Interpretivism holds that social phenomena, such as learning, capability development, financial behaviour, and institutional practice, are socially constructed and should be explored through the meanings and values within which they occur. The study examines documentary evidence about farmer training and how it is represented, conceptualised, and justified in relation to financial literacy, farm management, and agricultural productivity.

Farmer training, financial literacy, and agricultural productivity are not merely technical variables; they are also shaped by institutional goals, policy discourse, extension programs, financial-system arrangements, cultural practices, and farm-household experiences. Governments, international organisations, training providers, and research institutions produce documents that not only describe conditions but also shape perceptions of farmer development, sound financial practices, and productive farming. Documents are therefore treated not simply as neutral reflections of reality but as socially produced accounts (Bowen, 2009).

A further philosophical consideration is the researcher's role as an active interpreter of documentary material. Meaning is developed through repeated engagement with texts, comparison across documents, and reflection on their underlying assumptions. This approach allows the study to consider different types of training and the relationships among individual capabilities, financial decisions, institutional support, and farm outcomes.

The research design is qualitative, exploratory, and documentary, using secondary data. The study does not seek to estimate statistical relationships or test hypotheses; rather, it examines meanings, concepts, institutional practices, and relationships in context. The exploratory design is appropriate for examining an underdeveloped area of knowledge: the integration of HRM, farmer training, financial literacy, and agricultural productivity.

Documentary research is appropriate because it enables the systematic analysis of publicly available texts produced by institutions and other relevant actors. These texts address farmer training, agricultural extension, financial capability, rural development, and agricultural performance. Institutional documents often define intervention problems and provide information about problem definitions, responsibilities, rationales, and intended outcomes. They are therefore useful for examining the conceptual and institutional dimensions of farmer-capacity development, including the roles of extension services, financial institutions, and policymakers (Bowen, 2009; O'Connor et al., 2020).

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The study does not aim to calculate the productivity effects of training. Instead, it critically examines the potential pathways through which training may contribute to productivity in supportive institutional environments and may develop financial capabilities and farm-management practices. The design is consistent with the interpretivist approach and the study's aim of producing a non-causal conceptual synthesis.

3.2. Sources of Secondary Evidence

Secondary documentary evidence was selected purposively. The sources include peer-reviewed academic journal articles, scholarly books, theoretical publications, and methodological literature on HRM, HRD, and financial education. These sources provide the conceptual foundation for analysing farmer training as a human resource development intervention.

The documentary corpus also includes government documents on agricultural policies, extension, and training, as well as publications from financial and agricultural institutions. International development sources include the Food and Agriculture Organization of the United Nations (FAO), the World Bank, and the International Fund for Agricultural Development (IFAD). Their publications are relevant to farmer field schools, farm business schools, extension education, adult learning, and capacity building in agricultural settings (FAO, 2024, 2025). Reports were also included where they provided credible and relevant evidence on rural financial inclusion, agricultural finance, smallholder development, and rural livelihoods.

The study deliberately includes both academic and grey literature. Peer-reviewed publications provide theoretical and empirical support, while institutional documents and policies indicate the priorities, language, and implementation approaches of organisations involved in farmer training and rural financial development. Academic literature provides the conceptual foundation, while policy and institutional documents help examine how farmer-capacity development is understood and implemented in practice.

3.3. Document Selection and Appraisal

Documents were selected according to their relevance to the study rather than to a predetermined target number. The selection process focused on relevance to one or more research questions, particularly topics related to farmer training, financial literacy, financial decision-making, farm management, agricultural extension, productivity, HRM, and capacity development. Documents addressing only peripheral issues or lacking conceptual or institutional significance were excluded.

Second, the credibility of each source and the authority of the issuing institution were considered. Preference was given to publications from recognised academic journals, universities, international agencies, government bodies, and reputable agricultural or financial organisations. Third, methodological quality and transparency were assessed where applicable. For empirical studies, attention was paid to the clarity of the research design, data sources, analytical procedures, and conclusions. For policy and program documents, the assessment focused on the issuing organisation's authority, the clarity of the stated goals, the specificity of recommendations, and the evidence supporting the claims.

Fourth, publication dates were considered to ensure that the review reflected recent developments in agricultural extension, financial inclusion, digital learning, and farmer-capacity development. Seminal works were retained, while recent publications from 2020 to 2026 were prioritised where relevant. Finally, documents were assessed for their usefulness in conceptual synthesis. Documents were retained when they explained relationships among training, financial literacy, farm management, productivity, or institutional support. This approach enabled comparison across academic, policy, and institutional perspectives rather than treating documents as isolated sources.

3.4. Data Analysis

The study used the six-phase thematic analysis approach outlined by Braun and Clarke (2006) to analyse the documentary material. This method is suitable for identifying, organising, and interpreting patterns of meaning across a body of documentary data (Braun & Clarke, 2006; Bowen, 2009).

The first phase involved familiarisation with the selected documents. Each document was read several times to establish an understanding of its purpose, scope, arguments, and relevance to the research questions. Initial observations concerning farmer training, financial literacy, farm management, productivity, HRM, and institutional support were recorded in familiarisation notes.

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The second phase involved generating initial codes. The texts were systematically coded according to their relevance to the research questions. Codes included references to training content, competency development, experiential learning, budgeting, credit management, record-keeping, investment planning, extension support, technology adoption, market access, and productivity outcomes.

In the third phase, themes were developed by identifying broader patterns of meaning across the codes. The fourth phase involved reviewing and refining the themes against the coded extracts and the full documentary corpus. Themes were revised where they were too broad, insufficiently developed, or conceptually overlapping. In the fifth phase, the final themes were defined and named to reflect their analytical significance. The sixth phase involved producing an integrated analytical narrative that interpreted the themes in relation to the study's HRM-based conceptual framework.

The analysis was iterative rather than linear. The researcher moved between individual documents, coded extracts, emerging themes, and the overall body of evidence. The reviewed literature and institutional documents were examined for areas of agreement, contradiction, and conceptual silence (Braun & Clarke, 2006; Bowen, 2009).

3.5. Research Trustworthiness and Limitations

Credibility, transparency, and consistency were considered to support the trustworthiness of the analysis. Interpretations were supported by documentary evidence, and themes were developed from recurring patterns across multiple sources rather than from isolated statements. The document-selection process and analytical procedures were reported as transparently as possible. A consistent coding approach was applied across the documentary corpus in line with the study's research questions.

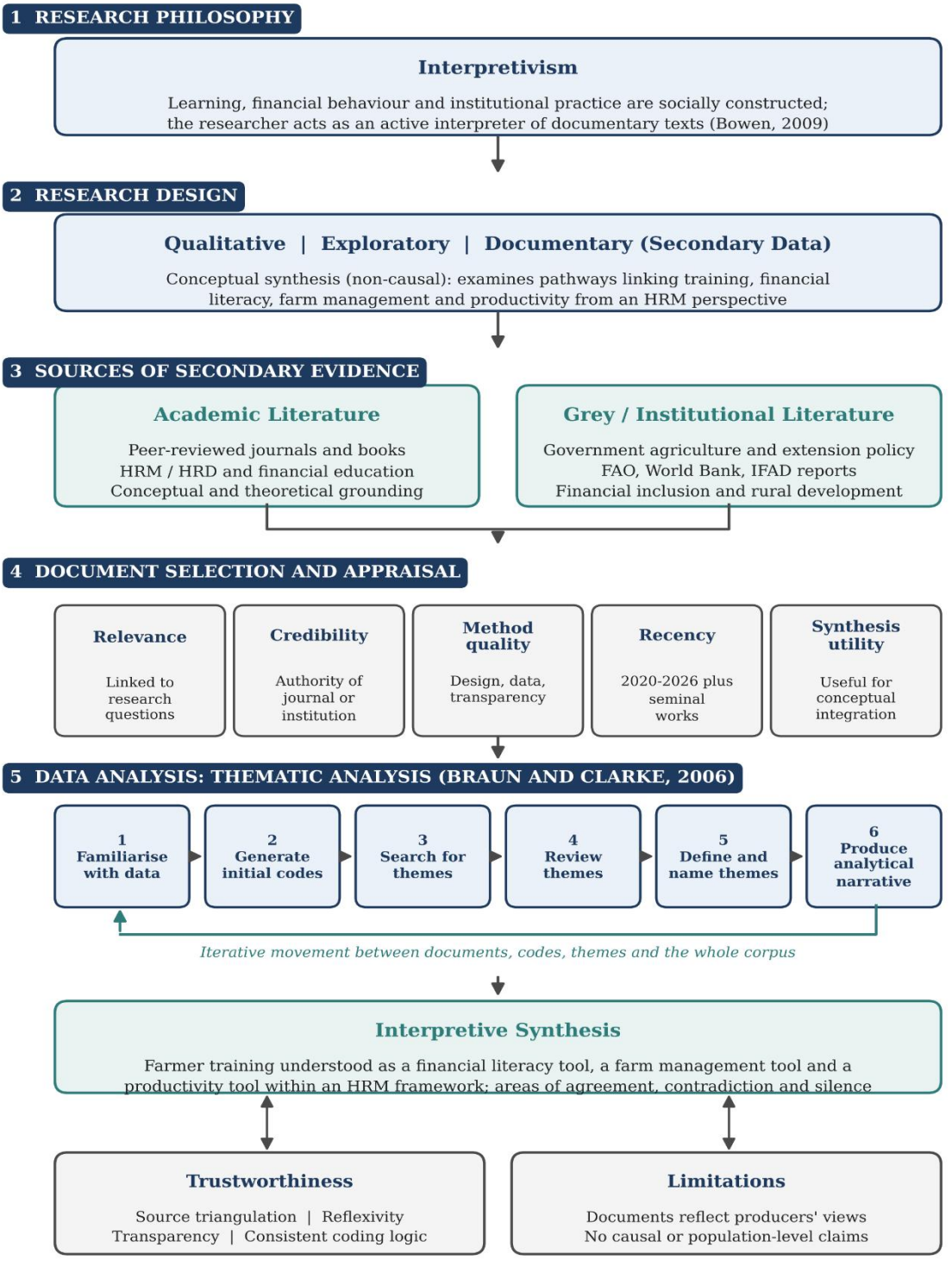
Perspectives were triangulated across peer-reviewed research, policy documents, institutional reports, and international development publications. This reduced reliance on any single source and supported a more balanced understanding of financial literacy, farm management, productivity, and training. Reflexivity was also considered: the researcher recognised that their HRM perspective could influence the selection and interpretation of documentary evidence. The findings are therefore presented as an interpretive synthesis rather than as an objective or definitive account.

The study has several limitations. Documentary records reflect the perspectives, interests, and concerns of their authors and may not represent farmers' actual practices, farming methods, or experiences of training programs. Some secondary sources may also contain bias or have purposes other than research. Because the study does not involve primary fieldwork, it does not establish causal relationships or support population-level inferences. Nevertheless, critical analysis of documentary evidence can contribute conceptually grounded and institutionally informed understanding of farmer training as a financial-literacy, farm-management, and agricultural-productivity intervention from an HRM perspective.

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Conceptual Framework of the Research Methodology

Farmer Training, Financial Literacy and Agricultural Productivity: A Documentary, HRM-Based Interpretive Synthesis



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4. Findings and Discussion

Five themes were identified through qualitative thematic analysis of the documentary sources. These themes are interconnected and relate to farmer training, financial literacy, farm management, agricultural productivity, and institutional capacity development. The findings do not establish direct causal effects or report outcomes from primary fieldwork; instead, they interpret how relationships among these areas are represented in academic, policy, and institutional documents.

4.1. Theme 1: Farmer Training as Human Resource Development

Across the documentary evidence, farmer training is presented as a human resource development process rather than merely a means of disseminating technical information. Training activities are described as interventions that can raise awareness and strengthen farmers' practical skills, confidence, problem-solving abilities, technical knowledge, and access to markets, technology, and financial services. For example, the FAO's (2024) farmer field school approach is grounded in adult non-formal education and emphasises learning by doing, experimentation, observation, and reflection. It places farmers in active learning and decision-making roles rather than positioning them solely as recipients of expert advice.

This finding is consistent with an HRM view of farmer training as an investment in agricultural human capital. Human capital theory proposes that investment in education, training, and skills development can increase productive capacity. In agriculture, this may include technical skills, financial knowledge, managerial skills, and adaptive learning. The reviewed documents suggest that training which develops integrated competencies may be more valuable than training focused exclusively on technical skills. Such competencies include financial and digital literacy, record-keeping, business management, cooperative governance, collective input procurement, and market access (World Bank, 2026).

The evidence also suggests that structured training can support ongoing professional learning by providing repeated exposure, peer exchange, coaching, and opportunities to apply new knowledge. Experimentation, problem-solving, and the retention of skills within farmers' own production systems are often associated with farmer field schools, farmer-producer groups, and blended learning models (World Bank, 2026; FAO, 2024). This is consistent with adult learning theory, which emphasises relevance, experience, participation, and application. It also supports experiential learning theory, according to which learners develop competencies through observation, experimentation, reflection, and adaptation.

However, the documents do not indicate that training invariably leads to increased human capital or improved performance. Sustained, context-specific, participatory training and follow-up support are important for effective capability development. IFAD's development-effectiveness reporting also identifies sustained training, financial inclusion tools, and market access as important elements of development interventions (IFAD, 2025). From an HRM perspective, this supports viewing farmer development not as a one-off event but as an ongoing process requiring organisational and institutional support.

4.2. Theme 2: Financial Literacy and Improved Financial Decision-Making

A second theme concerns the role of training in strengthening farmers' financial literacy and financial decision-making. The reviewed studies frequently identify budgeting, cash-flow management, saving, credit education, debt management, financial record-keeping, and household income management as important components of financial education. For example, financial education incorporated into an IFAD farming program in Indonesia focused on cash-flow management, financial reporting, household financial management, budgeting, and the preparation and updating of financial records (IFAD, 2025).

These components reflect not only knowledge of financial products but also managerial capability. A farmer who can prepare budgets, maintain basic records, understand cash flow, and distinguish productive from non-productive expenditure may be better equipped to make informed financial decisions. Documentary evidence suggests that financial education can strengthen farmers' ability to plan, monitor, and evaluate farm finances. Recent studies linking financial literacy with management-accounting practices, profitability, borrowing, and entrepreneurship (Hansson et al., 2026; Liu et al., 2025) provide further support for this interpretation.

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However, financial education does not always lead to improved access to credit or other financial services. In the Indonesian program, partner banks provided financial education to borrowers, but this did not appear to result in improved credit access for the target group during the reporting period (IFAD, 2025). This finding challenges the assumption that financial education alone can resolve financial exclusion. Farmers also need accessible, affordable, and appropriately designed financial products, as well as institutional support to apply what they have learned.

The analysis also identifies financial literacy as a gender-sensitive and inclusive capability. Training on gender-inclusive financial literacy and land rights used scenarios, role-play exercises, and contributions from guest speakers and participants to connect financial concepts with everyday life (FAO, 2024). This suggests that financial education involves more than cognitive knowledge; it also relates to confidence, social norms, autonomous decision-making, and the application of knowledge within families and communities. From an HRD perspective, competency development therefore extends beyond technical skills to include behavioural, relational, and institutional dimensions.

This section examines the relationship between training, farm-management competencies, and the effective use of resources.

4.3. Theme 3: Relationship between training, financial skills, and farm-management practices

The reviewed evidence indicates that technical agricultural training is increasingly being combined with business, financial, and organisational skills. For example, the World Bank's smallholder transformation program includes financial and digital literacy, input sourcing and procurement, cooperative governance, market access, record-keeping, and service contracting for farmers (World Bank, 2026).

This integrated approach recognises that farm management involves more than applying agronomic practices. Effective farm management requires farmers to plan activities, allocate scarce resources, record production costs, evaluate returns, manage inputs and labour, and make investment decisions. Financial record-keeping is particularly important because it provides information for these decisions. When cost and sales data are missing or incomplete, farmers may find it difficult to calculate enterprise profitability or assess the financial viability of proposed investments.

The evidence indicates that training may support resource utilisation by increasing farmers' awareness of costs, returns, and trade-offs. Capacity-building programs that combine financial education, business management, and collective procurement may help farmer associations strengthen their bargaining power, identify markets, and manage shared resources more effectively (World Bank, 2026). This is consistent with the resource-based view, which emphasises that organisational performance depends not only on the resources available but also on the ability to use them effectively. Financial literacy can therefore be viewed as a skill that helps farmers use their resources more effectively and sustainably.

However, this analysis does not establish a direct relationship between training and improved resource allocation. The availability of resources is also important to the success of training. IFAD's impact assessment highlights training, extension, and access to finance as ways of helping farmers obtain productive assets, including machinery, seeds, irrigation, and other inputs (IFAD, 2025). This indicates that financial skills and access to productive resources are complementary.

4.4. Theme 4: Financial Education and Agricultural Productivity

The fourth theme concerns the potential for financial education and farm-management capabilities to support agricultural productivity. The documentary evidence frequently emphasises the combined importance of training, improved inputs, technology adoption, market access, infrastructure, and financial services. One program supported farmers' productive capacity through training, demonstrations, incentives, and community extension workers (IFAD, 2025). Similarly, farmer field schools may promote improved water management, seed selection, and fertiliser application, with positive yield effects reported in some settings (World Bank, 2024).

The documents suggest that financial literacy may contribute indirectly to productivity through planning, investment decisions, and more efficient resource use. Knowledge of cash flow, production costs, and credit requirements may help farmers make informed decisions about seed, irrigation, machinery, storage, and market-oriented production. Financial capability may also support risk management by helping farmers anticipate seasonal income changes, manage debt, and make financially informed choices. In this respect, financial capability may connect production knowledge with economic performance.

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The evidence does not establish financial literacy as a prerequisite for productivity. Agricultural productivity is also influenced by land quality, water availability, climate, infrastructure, affordability, market access, and institutional support. IFAD (2024) highlights the importance of services and infrastructure—including credit, insurance, and roads—in helping farmers increase productivity, expand their businesses, and access markets. In addition to training, irrigation, water infrastructure, and technical and financial assistance may support productivity (IFAD, 2025).

The distinction between productivity potential and realised productivity is therefore important. Financial literacy may strengthen productivity potential by improving planning, investment, and resource-use decisions. However, actual productivity outcomes depend on farmers' ability to realise that potential under prevailing production and market conditions. The study therefore interprets the relationship among training, financial literacy, and productivity as conditional and context-dependent, with institutional and structural factors playing important roles.

4.5. Theme 5: Institutional Constraints and Enabling Factors for Effective Farmer Training

The fifth theme concerns the institutional conditions that facilitate or constrain farmer-capacity development. The documentary evidence identifies several barriers, including inadequate training facilities, weak extension systems, limited financial support, lack of access to digital tools, language barriers, gender disparities, and training that is not relevant to farmers' practices. For example, an IFAD report noted that a project aiming to reach 150,000 beneficiaries with financial literacy activities in Sierra Leone had not achieved its intended reach by the reporting period; the report recorded 1,194 beneficiaries and cited data gaps and implementation challenges (IFAD, 2025). This figure is a program-specific example, not a universal estimate, and illustrates the implementation and outreach challenges that capacity-building initiatives may face.

The evidence also emphasises inclusive program design. A more responsive approach would recognise the different needs of farming populations, prioritise women and young people where appropriate, provide localised coaching and peer learning, and link training with finance and markets. The impact assessment also highlights interventions for young people, including vocational training, individual coaching, input packages, and start-up financing, as well as the need for gender-sensitive extension services (IFAD, 2025; World Bank, 2026).

The findings suggest several ways to improve farmer-development programs. First, training should be tailored to local production systems, market conditions, and farmers' existing knowledge. Second, financial education should be integrated into wider agricultural extension programs rather than treated as a separate financial issue. Third, training should be continuous rather than limited to a single workshop, with coaching, peer learning, demonstrations, and refresher sessions. Fourth, programs should connect financial education with affordable credit, savings products, insurance, digital services, and market linkages. Finally, capacity development should be gender-inclusive and address language, literacy, and access barriers.

4.6. Integrated Interpretation

Overall, the findings suggest a relationship among farmer training, financial literacy, and agricultural productivity within an HRM approach that emphasises capability building, resource allocation, and institutional support. Farmer training can be viewed as a strategic HRM activity that develops farmers' human capital through technical, financial, managerial, and adaptive skills. Financial literacy supports more informed decisions about budgeting, saving, borrowing, record-keeping, investment, and financial risk management. These capabilities can be applied to farm management and resource utilisation and may, in turn, support productivity.

This relationship should not be interpreted as causal because the study does not establish cause and effect. Training and financial literacy may strengthen productivity potential, but enabling conditions—including land, water, inputs, credit, infrastructure, markets, and institutional support—are critical to achieving productivity gains. The study therefore applies HRM concepts of human-capital development, competency building, continuous learning, and performance support to agriculture. It also indicates that farmer training should form part of a broader farmer human resource development system rather than being treated as a purely technical solution. Farmers with stronger financial knowledge and management practices may be better equipped to make informed decisions, organise resources, and respond to factors affecting productivity.

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5. Recommendations

Farmer training should not be treated as a single, isolated educational activity. It is an important investment in human resource development within agricultural institutions. The findings suggest that continuous learning, practical application, coaching, and follow-up support increase the likelihood that participants will develop lasting competencies. Training should therefore be embedded in a longer-term extension and capacity-development system that operates across multiple production cycles.

Financial skills should be integrated into agricultural training programs through practical curricula covering budgeting, saving, credit management, farm accounting, investment planning, debt management, and financial risk assessment. These topics should be taught through farm-based examples, simple record-keeping exercises, and decision-making scenarios that reflect farmers' production and market conditions. Such integration can support the use of financial information in input purchasing, investment, and enterprise planning.

Training should be tailored and flexible to reflect farmers' learning needs, agricultural systems, and financial circumstances. Standardised programs may not suit differences in farm size, cropping systems, market access, literacy, and access to finance. Programs should therefore use participatory methods, local case studies, demonstration plots, and adaptable learning materials to ensure relevance and practical application.

Cooperation should be strengthened among agricultural extension departments, financial institutions, universities, government agencies, and farmer organisations. The findings indicate that financial literacy does not necessarily ensure access to financial services or products. Farmers therefore need appropriate credit services, financial guidance, and practical support alongside training. Coordinated approaches can create stronger links among financial education, agricultural extension, and financial services.

Inclusive learning opportunities should be expanded to reach smallholder farmers, women farmers, rural communities, and people with limited literacy or digital skills. Training should use accessible language, visual aids, and practical examples. Group-based or face-to-face delivery may be appropriate where digital materials are unavailable. Participation barriers can also be reduced through gender-responsive program design, childcare support where needed, convenient scheduling, and targeted outreach.

Capacity building should continue beyond initial training. Refresher courses, peer learning, demonstrations, farmer field schools, and accessible digital learning materials can deepen knowledge, encourage experimentation, and help farmers adapt to climatic, market, and financial changes.

Agricultural institutions should assess training needs and program effectiveness using appropriate qualitative tools. Evaluation should consider the relevance of the content, the development of financial and managerial competencies, confidence in decision-making, learning practices, and the institutional challenges farmers face. Monitoring can provide feedback for improving curricula, delivery methods, and follow-up support. Together, these recommendations may strengthen financial capability, responsible farm management, and sustainable agricultural productivity.

6. Conclusion

This study examined the relationship among farmer training programs, financial literacy, and agricultural productivity from a human resource management (HRM) perspective. It reframed farmer training from a process of information dissemination into a strategic human resource development activity. A qualitative, interpretivist, exploratory approach based on secondary documentary evidence was used to examine how training may strengthen farmers' financial competencies and farm-management skills and how it may contribute to agricultural performance in supportive institutional settings.

The analysis produced five interconnected insights. First, farmer training can be understood as human resource development that strengthens farmers' technical knowledge, practical and managerial skills, confidence, and adaptability. It is therefore more than the dissemination of agronomic knowledge; it is an investment in agricultural human capital. Second, financial literacy is an important farmer capability. Training in budgeting, saving, credit and debt management, farm accounting, investment planning, and financial risk assessment may support better-informed financial decisions. Third, financial skills are related to farm management and resource utilisation. Financial knowledge can help farmers plan, understand costs, maintain records, obtain inputs, assess new technologies, and manage scarce resources. Fourth, financial literacy may contribute to agricultural productivity through improved investment decisions, planning, and resource and risk management. However, productivity also depends on land quality, water availability, climate, infrastructure, market access, input affordability, and institutional support. Finally, the analysis identified

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institutional challenges and opportunities relating to training facilities, extension systems, digital inclusion, gender equality, language, and the relevance of training to farmers' needs.

Theoretically, the study contributes to HRM and HRD scholarship by applying human capital theory, HRD theory, the resource-based view, experiential learning theory, and adult learning theory to agriculture. It views farmers as human capital whose capabilities can be strengthened through systematic learning, participation, continuing support, and institutional facilitation. The study also contributes to financial-literacy research by treating financial knowledge as a managerial competency rather than solely as an individual financial attribute. It brings HRM, HRD, financial literacy, farm management, and agricultural performance together in one conceptual framework.

The study has practical implications for agricultural training institutions, financial organisations, extension departments, rural development agencies, and policymakers. These stakeholders should recognise farmer development as an ongoing process involving technical, financial, managerial, and entrepreneurial learning. Training programs should be participatory, inclusive, context-specific, and connected to financial services, market opportunities, and follow-up support. Institutional coordination is essential because financial education alone cannot resolve structural barriers such as limited access to credit, inadequate infrastructure, weak market linkages, and insufficient extension coverage.

A central lesson is that well-designed and effectively delivered farmer training and financial literacy initiatives may strengthen farmers' capabilities, particularly when supported by an enabling environment. Farmers may acquire financial knowledge but remain unable to apply it effectively if they lack access to credit or infrastructure, face unstable markets, or experience restrictive environmental conditions. The study therefore cautions against assuming that training automatically produces productivity gains. Instead, it highlights the need to combine human-capacity development with institutional, financial, and structural support.

Several limitations should be acknowledged. The study relies exclusively on secondary documentary evidence and therefore does not capture farmers' lived experiences, informal learning practices, or the day-to-day implementation of training programs. It also does not establish direct causal relationships among training, financial literacy, and productivity. Future context-specific qualitative field research could explore farmers' experiences of training, their financial decision-making, and the institutional environments in which they learn and apply new knowledge. Such research could improve understanding of how farmer-training programs are implemented and how they affect farming communities.

Sustainable agricultural development requires more than knowledge alone. It requires capable farmers who are financially and managerially competent, continuously learning, and supported by responsive institutions. Integrating human resource development (HRD) with financial-skills training may help strengthen responsible farm management, agricultural capacity, and sustainable productivity.

References

[1] Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. National Bureau of Economic Research; Columbia University Press.

[2] Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120. https://doi.org/10.1177/014920639101700108

[3] Knowles, M. S., Holton, E. F., III, & Swanson, R. A. (2015). *The adult learner: The definitive classic in adult education and human resource development* (8th ed.). Routledge.

[4] Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

[5] Swanson, R. A., & Holton, E. F., III. (2009). *Foundations of human resource development* (2nd ed.). Berrett-Koehler Publishers.

[6] Armstrong, M., & Taylor, S. (2023). *Armstrong's handbook of human resource management practice* (16th ed.). Kogan Page.

[7] Noe, R. A. (2023). *Employee training and development* (9th ed.). McGraw-Hill Education.

[8] Kim, K. N., & Park, S. (2025). An integrative review and future agendas for human resource development. *Human Resource Development Review, 24*(2), 223–251. https://doi.org/10.1177/15344843241280999

[9] Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior, 4*, 339–366. https://doi.org/10.1146/annurev-orgpsych-032516-113324

[10] Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

[11] Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27–40. https://doi.org/10.3316/QRJ0902027

[12] O'Connor, S., et al. (2020). Document analysis in health policy research: The READ approach. *Health Policy and Planning, 35*(10), 1424–1431. https://doi.org/10.1093/heapol/czaa105

[13] Nouatin, F., et al. (2025). Fostering farmers' innovativeness through training and agricultural extension services: A systematic review. *Innovation and Green Development, 4*(3), 100204. https://doi.org/10.1016/j.igd.2025.07.004

[14] Nyberg, Y., et al. (2025). Supporting access and implementation of agricultural extension services for women farmers: A systematic

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review. *International Journal of Agricultural Sustainability, 23*(1), 2505387. https://doi.org/10.1080/14735903.2025.2505387

[15] Tran, T. A. (2025). Unpacking extension agent–farmer relations and interactions. *Journal of Rural Studies, 115*, 103671. https://doi.org/10.1016/j.jrurstud.2025.103671

[16] Jellason, N. P., et al. (2025). Lead farmer extension and engagement: A case of Zango. *Development in Practice*. Advance online publication. https://doi.org/10.1080/09614524.2025.2534141

[17] Mdiya, L., et al. (2024). Empowering resilience: The impact of farmer field schools on smallholder farmers. *Sustainability, 16*(20), 8784. https://doi.org/10.3390/su16208784

[18] Kubo, H., et al. (2025). Assessing the contribution of farm forestry farmer field schools to climate resilience in mixed crop–livestock systems. *Sustainability, 17*(18), 8157. https://doi.org/10.3390/su17188157

[19] Caudell, M. A., et al. (2025). A longitudinal analysis of layer farmer field school graduates. *Antimicrobials and Resistance, 14*, Article 1580. https://doi.org/10.1186/s13756-025-01580-z

[20] Sher, A., et al. (2025). The impact of digital training on adoption of energy-smart agricultural practices and farmers' welfare. *Scientific Reports, 15*, Article 16804. https://doi.org/10.1038/s41598-025-16804-w

[21] Hansson, H., et al. (2026). Farmers' financial literacy—Scale development and validation. *Agribusiness*. Advance online publication. https://doi.org/10.1002/agr.21986

[22] Liu, Y., et al. (2025). The effect of financial literacy on agricultural entrepreneurship: Evidence from China. *Finance Research Letters, 74*, Article 103671. https://doi.org/10.1016/j.frl.2024.103671

[23] Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature, 52*(1), 5–44. https://doi.org/10.1257/jel.52.1.5

[24] Organization for Economic Co-operation and Development. (2020). *OECD/INFE 2020 international survey of adult financial literacy*. OECD Publishing. https://www.oecd.org/financial/education/launchoftheoecdinfeglobalfinancialliteracysurveyreport.htm

[25] Food and Agriculture Organization of the United Nations. (2024). *Farmer field school guidance document*. FAO. https://openknowledge.fao.org/handle/20.500.14283/I5296E

[26] Food and Agriculture Organization of the United Nations. (2024). *Farmer field schools: Key practices for DRR implementers*. FAO. https://openknowledge.fao.org/server/api/core/bitstreams/bf0a59ea-f317-419b-9db1-c077d8af71c4/content

[27] Food and Agriculture Organization of the United Nations. (2025). *More investment needed to build knowledge and skills of small producers—FAO report*. FAO. https://www.fao.org/forestry/newsroom/news-detail/more-investment-needed-to-build-knowledge-and-skills-of-small-producers---fao-report/en

[28] Food and Agriculture Organization of the United Nations. (2026). *Global Farmer Field School platform: Partners*. FAO. https://www.fao.org/farmer-field-schools/partners/en

[29] International Fund for Agricultural Development. (2024). *IFAD annual report 2024*. IFAD. https://www.ifad.org/en/annual-report-2024/

[30] International Fund for Agricultural Development. (2025). *Report on IFAD's development effectiveness 2025*. IFAD. https://webapps.ifad.org/members/ec/130/docs/EC-2025-130-W-P-3.pdf

[31] International Fund for Agricultural Development. (2025). *IFAD annual report 2025*. IFAD. https://www.ifad.org/en/annual-report-2025

[32] International Fund for Agricultural Development. (2025). *Indonesia: The development of integrated farming systems—Supervision report*. IFAD. https://www.ifad.org/documents/48415603/50816551/IDN_2000002234_SUPERVISION_REPORT_MAR_2025_0010-22581848-2925.pdf/5f921add-8ceb-b027-38e172058879?t=1744012787806

[33] International Fund for Agricultural Development. (2025). Sierra Leone rural finance and community improvement program—Supervision report. IFAD. https://www.ifad.org/documents/48415603/50650867/SLE_1100001710_SUPERVISION_REPORT_FEB_2025_0024-1871414904-2925.pdf/5f921add-8ceb-b027-38e172058879?t=1738860429610https://www.ifad.org/documents/48415603/50650867/SLE_1100001710_SUPERVISION_REPORT_FEB_2025_0024-1871414904-2925.pdf/5f921add-8ceb-b027-38e172058879?t=1738860429610

[34] World Bank. (2024). *The state of economic inclusion report 2024: The potential to scale*. World Bank. https://openknowledge.worldbank.org/server/api/core/bitstreams/4f94ee11-7ff7-48c5-954d-e8ad37083572/content

[35] World Bank. (2026). *Smallholder transformation through access to markets, learning, and livestock finance in Uzbekistan: Project information document*. World Bank. https://documents1.worldbank.org/curated/en/099071426002028059/pdf/P515458-e97ba71d-977a-4ed9-bb5f-1ca40f90f727.pdf

[36] International Labour Organization. (2023). *Rural skills development and agricultural training: Guidance for policy and practice*. ILO. https://www.ilo.org/publications

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