

## Essential components of teacher professional development for financial literacy: A literature review

Silvyia Louis, Siswandari Siswandari, Leny Noviani

Department of Economics Education, Faculty of Teacher Training and Education, Sebelas Maret University, Surakarta, Indonesia

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### ABSTRACT

Financial literacy, as a fundamental skill in the 21<sup>st</sup> century, has become a life skill that is urgently needed to be improved. Globally, the drive to enhance financial literacy involves integrating it into the education curriculum, necessitating educators' comprehensive grasp of financial literacy education before imparting it to students. This research aims to outline a conceptual model of financial literacy professional development to improve teachers' professional competence, employing a narrative review that synthesizes 28 relevant literatures retrieved from Scopus databases. The results of the study show that an effective training model for teacher professional development (TPD) in financial literacy education should focus on essential financial literacy content consisting of planning and budgeting, banking services, income and careers, insurance, investment, savings, also spending and credit. Furthermore, the main characteristics of TPD regarding financial literacy education should encompass content focus, coherence, ownership, active learning, duration, and collective participation.

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### Corresponding Author:

Silvyia Louis

Department of Economics Education, Faculty of Teacher Training and Education, Sebelas Maret University

St. Ir. Sutami 36 Kentingan, Jebres, Surakarta, Jawa Tengah, Indonesia

Email: [silvyia.louis@student.uns.ac.id](mailto:silvyia.louis@student.uns.ac.id)

## 1. INTRODUCTION

Financial literacy is a 21<sup>st</sup> century life skill that encompasses the awareness, knowledge, skills, attitudes, and behaviors necessary to make sound financial decisions and achieve financial well-being [1]. Ministry of Education and Culture Republic of Indonesia defines financial literacy as one of the basic literacy which is a set of knowledge and skills to manage financial resources effectively for life welfare as well as basic needs for everyone to minimize, find solutions, and make the right decisions in finance problems [2]. Financial literacy plays multifaceted roles in the realm of financial inclusion, serving as a determining, moderating, mediating, and leading force [3]. The 2022 national financial literacy and inclusion survey shows that the financial literacy index of Indonesian people is 49.68%, increased from 38.03% in 2019 and the financial inclusion index is 85.10%, which means it has increased from 76.19% in 2019. This rise has been bolstered by extensive financial education, specifically utilizing a combination of offline and online approaches since the onset of the COVID-19 pandemic in 2020 [4]. It indicates that financial education can empower people to change their financial behavior and make well-considered financial decisions by providing them with necessary knowledge and skills to make informed choices about money [5].

Given their roles as educators, it is important for educators to possess the capacity to impart valuable financial literacy skills to their students, which can be achieved by integrating financial literacy into teacher training programs and providing some form of financial education to in-service teachers [6]. Furthermore, the

involvement of teachers in excessive loans in certain nations underscores the urgent need for improved financial literacy among educators to foster prudent financial decision-making [7], [8]. By honing their own financial literacy competencies, teachers can adeptly manage their personal financial affairs, because financial literacy led people to decide effective financial behavior [9]. This, in turn, equips teachers to proficiently convey financial literacy skills to their students [10]. Hence, there is a necessity to examine the most efficient financial education initiatives that can influence the financial behaviors of individuals and subsequently contribute to the financial inclusion [3].

Notably, this could involve models for teachers training or professional development programs to empower teachers in seamlessly integrating financial literacy into their teaching practices, thereby resonating with student learning. Such approach acknowledges that the sustained implementation of professional development can effectively cater to the evolving needs of teachers [11]–[13]. Improving the quality of professional development opportunities can help educators better grasp personal finance topics, understand available financial education resources, learn effective teaching methods, and comprehend the cultural and behavioral aspects of individual financial decisions [14]. It is also important to underscore the significance of financial literacy as not only an individual responsibility but also a societal obligation [15], [16].

Despite the growing emphasis about teachers' crucial role imparting financial knowledge, attitudes, and behaviors contrasts with the limited attention given to teacher professional development (TPD) initiatives in financial education [17]. Existing studies lack systematic investigations into the effectiveness of TPD initiatives, particularly concerning the key features of the general TPD model, highlighting the need for comprehensive insights into their design and implementation [18], particularly in the context of financial literacy education. Addressing these gaps is vital for enhancing the efficacy and sustainability of TPD programs, thereby improving the quality of financial education for both teachers and students. Integrating financial literacy into educational curricula and providing specialized training programs are recommended steps to improve teachers' ability to deliver effective financial education [19]. This research aims to identify the core features essential for integrating into the framework of a financial literacy training program for teachers, offering a novel contribution to the field by addressing deficiencies in current financial education initiatives and paving the way for future improvements in financial literacy education in schools.

## 2. METHOD

The researcher conducted a narrative review, which is a type of literature study that summarizes the findings of previous studies on a particular topic [20]. During the review conducted from December 2022 until February 2024, the author carried out the search within the Scopus databases using keyword combinations related to financial literacy, financial education and teacher training or TPD. After the initial round, the identified studies underwent screening based on the research questions and review purpose, applying selection criteria such as English language publications, as well as those sharing a common theme. Additionally, the snowballing technique of references was also employed to discover relevant articles from those initially retrieved. As a result, a total of 28 pertinent documents were identified.

## 3. RESULTS AND DISCUSSION

### 3.1. Key features of teacher professional development in financial literacy

Based on the literature study conducted, it can be explained that a TPD program for financial literacy education requires several key features. Common models outlining the effectiveness of TPD suggest that the initiatives need to incorporate various key elements [17], [18], [21]–[26] consist of: (i) content focus, (ii) coherence, (iii) ownership, (iv) active learning, (v) sustained duration, and (vi) collective participation. These elements relate to both the content and structure of TPD.

Content focus in financial literacy education involves prioritizing subject matter, using evidence-based practices, and ensuring alignment with learning requirements [22], [27]. Programs should incorporate experiential learning, relevance, and alignment with students' life events to motivate engagement [5], [28], with fundamental topics include: (i) planning and budgeting, (ii) banking services, (iii) income and careers, (iv) insurance, (v) investing, and (vi) savings. Additionally, the implementation of financial literacy can be tailored to align with the contextual needs and socio-cultural circumstances of different communities [2]. Furthermore, financial education should impart sufficient knowledge of financial products, terms, and decision-making tools, integrating numeracy skills for proficiency [29]. It is also suggested that teachers should develop students' financial attitudes and behaviors alongside knowledge, aligning subjects with daily life and differentiating instruction [17].

Coherence in TPD for financial literacy education entails aligning financial concepts within the broader educational framework, ensuring that experiences offered in the program are in line with teachers' objectives, standards, and reforms [22]. The coherence of an initiative also signifies its alignment with established curriculum and academic standards, as it allows for the systematic and structured delivery of financial education across different grade levels and subjects [30]. Many of the evaluated TPD initiatives demonstrate coherence due to their explicit alignment with national standards and focus on providing teachers with specific program instructions [17].

Ownership in TPD for financial literacy education involves teachers identifying their own needs and interests to make the initiatives more meaningful. Professional development is found more impactful by teachers when control over the content and process is exerted, with examples often drawn from their own practice [22]. The "teacher-as-learner" approach can be utilized to better equip the educators for teaching financial education [31]. It means ownership involves a personal investment from educators in the outcomes of financial literacy education. While the teachers' approach as a learner, combining the characteristics of a sense of ownership and active learning can also be applied [17].

Active learning in TPD for financial literacy education emphasizes the importance of engaging educators in participatory and practical learning experiences to enhance their proficiency in teaching financial concepts. These strategies involve activities like delivering trial lessons or engaging in discussions, which contribute more significantly to teacher learning than passive listening [17], [32]. When teachers actively participate as co-creators of knowledge, they encounter less resistance to professionalization [22], becoming more open to adopting professional practices and improving their skills. A 2021 study found that an interactive webinar series effectively increased student financial literacy levels in the short-term and long-term. However, sustained impact on student behavior requires further investigation into how teachers can be educated to maintain their influence on student behavior [32].

For professional development to significantly improve teacher performance, it is crucial that the duration, including both the time span and total hours invested, is substantial [17]. Many scholars contend that extended and intensive programs allow teachers ample time to reflect on insights, explore classroom approaches, and evaluate progress [33]. Research suggests that activities spread over time, such as semester-long courses with 20 or more hours of contact time, are beneficial for teacher development [22], [24]. From this viewpoint, some professional development programs adhere more closely with the idea of lifelong learning compared to programs that only last a few days each school year [34].

Collective or collaborative participation entails working together with both internal and external peers, such as observing practices and providing feedback [22]. Collaborative design is presumed to have a positive impact on professional development and curriculum implementation [35]. A 2021 study comparing teacher design teams (TDTs) found that less experienced teachers showed increased knowledge after participating [23]. However, the study suggested that four TDT meetings were insufficient for optimal results, as team members need time to know each other and set goals before working on new material. The results of this study also show that teachers must be motivated to engage in teams and that they must be adequately facilitated by the school principal. Similarly, while materials aligned with the new standards are not yet available, teachers still rely on the expertise of trainers for information about the content to be covered and the related pedagogical content knowledge [23]. On the same side, the implementation of TDT represents a demand-driven professional development strategy wherein teachers actively participate and collaborate, while also embodying the dual role of teacher educators, who not only teach specific subjects but also instruct others on teaching methods [36].

Furthermore, collaborative efforts between government entities, financial institutions, and community organizations have the potential to foster a more supportive and accessible economic landscape [3]. Collective participation also encompasses the establishment of professional learning communities (PLCs) among teachers as a form of TPD, encouraging collaborative activities [17], [24]. PLCs represent a widely recognized approach that teachers are more likely to improve their practice and enhance student learning when they have opportunities to collaborate with their peers, share ideas and resources, and receive ongoing support and feedback [37]–[39]. However, there is limited evidence on how key features are integrated into the framework [17]. Based on this premise, Figure 1 illustrates the systematic arrangement of general basic principles in TPD implementation, serving as a foundation for designing PLC programs in financial literacy education.

A study conducted in 2014 noted that teachers have the additional responsibility of educating students after receiving professional development [40], emphasizing the necessity for clearer policy goals, improved professional development, and program evaluations. Subsequent research in 2019 argued for a shift in focus from teaching to encourage the accumulation of individual wealth—for example, the importance of working, budgeting, and saving, towards a more practical and contextual approach about financial literacy

[41]. Concurrently, teachers are urged to possess the ability and the willingness to teach personal finance effectively, encompassing proper knowledge, attitudes, and behaviors [42].

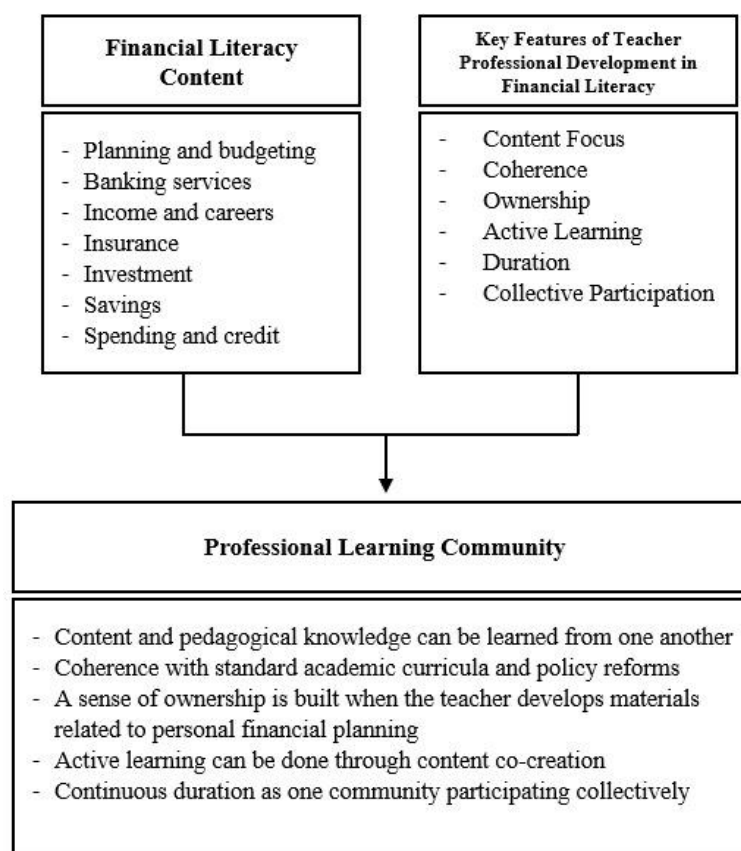


Figure 1. Essential contents and key features of teacher professional development in financial literacy

Another study conducted in South Africa investigated the deficiencies in teaching and learning financial literacy, specifically focusing on the accounting subject in Grade 9 [43]. The research emphasized the importance of integrating different knowledge areas to accurately address teachers' challenges. The study recommended conducting a detailed analysis to develop responsive teacher development materials. Additionally, it proposed establishing professional learning communities where rural and urban teachers collaborate to tackle common issues and reduce isolation. Utilizing social networking sites for teacher and learner support was also suggested to facilitate continuous professional development.

In addition to the aforementioned studies, additional notable studies contribute valuable insights into community-based financial literacy education for adults [44], [45]. Both studies highlight that the educator's viewpoint is often overlooked. However, understanding their views on financial literacy teaching related to contextual factors such as curriculum, technology, and setting is important. Many teachers lack sufficient technology training in TPD, despite holding a positive attitude towards technology and acknowledging its educational benefits [46], [47], particularly evident in online TPD settings [48]. By exploring financial educators' perspectives, the studies provide insight into class dynamics, student traits, and community programs offering financial literacy classes. The practical implications include encouraging educators' self-reflection on their beliefs, aligning curriculum with learners' circumstances, utilizing engaging pedagogical techniques, implementing ongoing evaluation strategies, and recognizing financial competence and behavior change as a gradual process.

### 3.2. Conceptual model of teacher professional development program in financial literacy

The implementation of the TPD programs in financial literacy education can be carried out through collective participation in the form of a PLC which allows the program to be sustainable, because it needs to be understood that learning for professional development is a coherent process and is on-going or continuous

[12], [13]. This teachers training can be pursued through collaboration between teachers to share content and pedagogical knowledge learned from one another, aligning understanding of coherence with academic standard curricula and policy reform so that it is easier to implement, building a sense of ownership when the teacher develops material related to personal financial planning as a form of embodiment of experiential learning, conducting active learning through content creation, then ensuring continuous duration as one community participating collectively [17].

The program could be arranged in a series of topics as shown in Table 1, each focusing on distinct topics crucial for enhancing educators' financial competence and instructional abilities. Beginning with collaboration for planning, teachers engage in the initial preparation of the program, defining objectives and aligning them with participant needs. Subsequent sessions delve into theoretical and practical aspects of financial management, covering personal and family budgeting, understanding basic banking services, and exploring various sources of income from different careers. Teachers also learn about the significance of insurance coverage, investment strategies, and effective savings practices. Additionally, they examine prudent spending habits, credit management, and types of loans. The program concludes with a session dedicated to monitoring and evaluating its sustainability, enabling teachers to assess its effectiveness and strategize long-term integration into the curriculum.

**Table 1. Recommended topics on conceptual model of TPD program in financial literacy**

Topics	Sub-topics
Collaboration for planning	Initial preparation of TPD programs
Planning and budgeting	Develop personal and family financial budget planning
Banking services	Get to know simple banking services that are often used
Income and career	Get to know the sources of income from various careers
Insurance	Recognize the importance of insurance services
Investment	Recognize the importance of investing
Savings	Tips for saving
Spending and credit	Get to know financial expenditure items and also types of loans
Monitoring and evaluation	Evaluation for the sustainability of the TPD programs

Sources: [5], [10], [11], [17], [49], [50]

In implementing TPD programs regarding financial literacy education, initial preparations and evaluations need to be carried out to ensure the program is sustainable. Initial preparation is the first step on the teacher learning continuum and should mark the beginning, not the end, of the professional development process [12]. The formation of a PLC needs to first pay attention to the objectives of the PLC participants, both from the teachers who will be involved, as well as other stakeholders, such as school administrators, financial literacy experts, or community members. Once the PLC is established, member introductions can commence, and goals and objectives pertaining to financial literacy content can be set, as it is essential for team members to acquaint themselves with one another and establish shared objectives before embarking on developing new material [23].

Initial goal planning can be tailored to the specific needs and goals of teachers and students, and takes into account the context and challenges of each teacher's class [51]. After that, activities can be continued with planning the PLC structure and schedule, including the frequency and duration of meetings according to the teacher's schedule, as well as meeting formats (such as face-to-face or virtual), as well as planning activities and resources to be used in PLC, including lessons or literacy activities financial, resources and materials related to financial literacy, and other support or resources that may be needed. Effective TPD is crucial for equipping educators with the knowledge and tools to effectively teach financial education in line with state standards, ensuring their confidence in the content and easy access of classroom resources, irrespective of the delivery format [52].

While evaluation is needed to monitor PLC progress and ensure PLC meets goals and objectives, so that necessary adjustments can be made as needed. Evaluation can be done by looking at the following dimensions [4]: (i) motivation, namely what motivates teachers to engage in continuous professional learning?, (ii) access, namely how do teachers access continuous professional learning?, (iii) provisions of administration, i.e. how and by whom is continuous professional learning provided? iv) content, namely how is continuous professional learning content selected to suit the needs? and (v) quality, namely how to ensure the quality of continuous professional learning? These efforts can be arranged in the form of an initial prototype of the conceptual design of the financial literacy professional development program for teachers.

These efforts can be arranged in the form of recommended activities for the conceptual model of TPD program in financial literacy shown in Table 2 to provide a structured framework for enhancing educators' proficiency in financial concepts and instructional strategies. It begins with collaborative planning

within a PLC to align goals with financial literacy content. Subsequent activities include introducing members, setting goals, and structuring PLC schedules. During planning and budgeting sessions, educators discuss pedagogical materials, contextualize topics to local life, and co-create content based on personal financial planning. The program further explores banking services, income and career, insurance, investment, savings, and spending and credit, fostering comprehensive understanding in these areas. Finally, monitoring and evaluation activities assess the progress of PLC considering factors like motivation, access, implementation terms, content quality, and continuous professional learning. This structured approach equips teachers with the necessary knowledge and resources to effectively integrate financial literacy education into their teaching practices, ultimately empowering students to make informed financial decisions.

Table 2. Recommended activities on conceptual model of TPD program in financial literacy

Topics	Activities
Collaboration for Planning	<ul style="list-style-type: none"> <li>- Formation of PLC by taking into account the target of PLC participants</li> <li>- Introduction between members and setting goals and objectives related to financial literacy content</li> <li>- Discussion on the following matters:               <ul style="list-style-type: none"> <li>a. PLC structure and schedule planning</li> <li>b. Planning activities and resources</li> </ul> </li> </ul>
Planning and budgeting	
Banking services	
Income and career	<ul style="list-style-type: none"> <li>- Discussion and exchange of ideas about pedagogical materials and methods</li> </ul>
Insurance	<ul style="list-style-type: none"> <li>- Discussions about the context of local life related topics and sub-topics</li> </ul>
Investment	<ul style="list-style-type: none"> <li>- Material development based on personal financial planning</li> </ul>
Savings	<ul style="list-style-type: none"> <li>- Content co-creation</li> </ul>
Spending and credit	
Monitoring and Evaluation	Implementation and evaluation for monitoring the progress of PLC programs by taking motivation, access, terms of implementation, content, and quality of the PLC as continuous professional learning into account.

Sources: [5], [17], [38], [39], [49], [50]

#### 4. CONCLUSION

Based on the analyses of the reviews presented, it can evident that the design of a TPD model regarding financial literacy education is a fundamental requirement that needs to be prepared initiatively during curriculum implementation. The conclusions drawn to address the formulated problem underscore the essential elements necessary for designing TPD programs in financial literacy education. These elements include the comprehensive coverage, such as planning and budgeting, banking services, income and careers, insurance, investing, savings, also spending and credit. Additionally, the key characteristics of TPD in financial literacy education involve content focus, coherence, ownership, active learning, duration, and collective participation. These findings emphasize the significance of incorporating these elements into the design and implementation of TPD initiatives to enhance financial literacy education effectively.

The design of TPD programs in financial literacy education that is suitable for implementation according to the school context needs to encourage several key activities. Firstly, preparation involves the formation of a PLC, considering the participants' goals, introducing members, and establishing objectives related to financial literacy content. Initial discussions should also address the structure, schedule, and planning of activities and resources within the PLC. Subsequently, implementation entails adhering to the content and main characteristics of the PLC. This can be achieved through discussion activities, exchanging ideas on pedagogical materials and methods, exploring local life contexts relevant to the topics, and developing materials based on personal financial planning. Collaborative content creation on financial literacy is also essential. The initial prototype developed should be implemented according to the specific needs and challenges faced by the school community. This comprehensive approach ensures the effective integration of TPD initiatives into the school environment, fostering meaningful financial literacy education.

The implication of this research is to contribute knowledge by presenting an initial prototype of TPD programs, particularly in the context of financial literacy education. However, this study acknowledges that there are limitations since this research is based on a literature review. Future study could broaden references and explore detailed evaluation of PLC effectiveness as a TPD model in financial literacy education.

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**BIOGRAPHIES OF AUTHORS**

**Silvy Louis**    is a master's student in Department of Economics Education at Sebelas Maret University. She holds her Bachelor of Education degree from two universities, Universitas Pelita Harapan in collaboration with Corban University. She has seven years of teaching experience in high schools and began pursuing a higher degree at the graduate level since 2022. She is interested in further researching financial literacy curriculum and teacher education. She can be contacted at email: [silvy.louis@student.uns.ac.id](mailto:silvy.louis@student.uns.ac.id).



**Siswandari Siswandari**    is a senior lecturer at the Department of Accounting Education, Faculty of Teacher Training and Education, Sebelas Maret University, Surakarta. She has been teaching since 1985 and has also served as a member of the Peer Group at the Center for Entrepreneurship Development since 2002. She earned her Bachelor of Education degree from IKIP Malang in 1982, followed by a Master of Statistics degree from UNSW Australia, in 1995. She completed her Doctoral degree from the Postgraduate Program at the State University of Malang in 2006. Since 1999, she has been actively engaged in research focusing on enhancing the quality of human resources, particularly in areas such as personality traits, characteristics, transferable skills, soft skills, values, and competencies. She can be contacted at email: [siswandari@staff.uns.ac.id](mailto:siswandari@staff.uns.ac.id).



**Leny Noviani**    has been teaching at the Department of Economic Education, Sebelas Maret University, since 2005. She obtained her Undergraduate and Master's degrees from Sebelas Maret University, Surakarta, and her Doctoral degree from the State University of Malang. She is an active member of Aspropendo (Indonesian Economic Education Professional Association). In addition to her role as a lecturer in undergraduate and graduate programs, she also holds a structural position as the Head of the Economics Education Program at Sebelas Maret University. She can be contacted at email: [lenynoviani@staff.uns.ac.id](mailto:lenynoviani@staff.uns.ac.id).