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Constructing and Validating a Professional Development Model for EFL Teachers: Insights from the Journal Club Approach

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Professional development for teachers is essential yet context-sensitive, requiring nuanced approaches for effective implementation. This study aimed to construct and validate a model of professional development for Iranian EFL teachers, integrating the journal club approach from medical education. Utilizing a multi-phase, multi-method design, the research involved 16 educational experts (10 from English and Linguistics departments and 6 assistant professors from medical universities), 50 participants for initial piloting, 90 for reliability estimation, 150 for exploratory factor analysis, and 250 for confirmatory factor analysis. Data collection included a systematic literature review, documentary analysis, and semi-structured interviews. The validated model comprises four dimensions - Theoretical-Ideational, Instructional-Procedural, Organizational-Structural, and Attitudinal-Perceptional- encompassing 35 variables. Structural equation modeling confirmed the model's validity and reliability, offering actionable insights for stakeholders. Teacher educators can use this scale to evaluate EFL teachers' needs for developing and enriching professional development courses. This interdisciplinary approach highlights the potential of journal clubs in fostering effective teacher professional development.

Keywords: English language teaching, journal club, professional development, model construction, EFL

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INTRODUCTION

Teachers' professional development (PD) has been a central topic in applied linguistics. Warren (2016) emphasizes that PD serves as the most effective platform for integrative teacher growth. However, its scope varies across contexts, making it challenging to balance comprehensive content with necessary skills and experiences (Sipman et al., 2021). Despite extensive research and investment in PD, few studies clearly identify factors that enhance teaching practices (Warren, 2016). Additionally, much of the existing research lacks conceptual and theoretical depth. Key questions—such as how to conduct needs analyses for novice and experienced teachers, what skills and content to include, and how much time to allocate—remain unresolved. Moreover, many PD programs fail to address the specific needs of teachers in diverse global contexts (Ding et al., 2023). Given these challenges, there is a strong rationale for research that integrates conceptual, theoretical, and practical aspects of effective PD programs. Further studies are needed to assess the validity and reliability of new PD models, particularly in EFL contexts like Iran. While substantial research exists on PD in education and language teaching, significant gaps remain that require attention (Afshar & Doosti, 2022; Borg, 2015; Coşgun & Savaş, 2023; Darling-Hammond, Hyler, & Gardner, 2017; Kennedy, 2016; Sachs, 2016; Sato et al., 2022; Wright, 2010).

Khosravani et al. (2022) note that many existing models in language education are primarily theoretical frameworks rather than practical tools for implementation. While these models provide valuable insights, applying them effectively in PD remains a challenge. This study adopts a scientific approach to model development, ensuring reliability, validation, and practical applicability. Unlike other educational and language teaching fields that draw from disciplines such as psychology, sociology, and philosophy, PD has rarely benefited from interdisciplinary insights (Beauchamp & Thomas, 2009). To address this limitation, this study explores the journal club approach—widely used in medical and nursing education—as a model for PD in language teaching. Journal clubs facilitate the integration of current best practices, helping practitioners enhance evidence-based competence and critical thinking skills (Szucs et al., 2016). By adapting this approach to language teacher development, this study aims to offer a novel, interdisciplinary PD framework that bridges existing gaps in research and practice.

This study employs a robust research methodology to address existing gaps and deficiencies. Its significance is fourfold. First, it ensures comprehensive sampling by including diverse stakeholders in Iranian teachers' professional development, avoiding the exclusion of critical perspectives. This inclusivity enhances the applicability of findings (Nichols & Williams, 2009). Second, it achieves true triangulation by collecting data from the literature, relevant documents, and a representative expert panel, ensuring saturation (Mackey & Gass, 2016). Third, the study employs diverse qualitative and quantitative analysis methods, including content analysis, exploratory and confirmatory factor analysis in SEM, and qualitative interpretation through impact analysis. Lastly, it integrates various qualitative and quantitative software tools to validate and interpret findings. Unlike studies where SEM model visualization is the final step, this research extends further by using structural interpretation in a qualitative matrix of crossed impacts to explore variable interactions within the system.

Regarding the problems mentioned above, the identified gaps, and the significance of focusing on such gaps, the present study sought to answer the following question:

1. What factors and variables are related to the primary model of Iranian language teachers' professional development based on the journal club approach?
2. Is the developed scale a valid measure of the Iranian language teachers' professional development construct based on the journal club approach?

LITERATURE REVIEW

Theoretical Underpinnings of Professional Development

Undoubtedly, the quality each teacher reveals during instruction serves as a critical factor in promoting the learning of pupils and determining their success, failure, and future channel of job and education (Gershenson & Baugh, 2023; Hirsch et al., 2005, Warren, 2016). Darling-Hammond (2012) and Warren (2016) have demonstrated that in Western educational societies such as the United States, the most reliable path toward fulfilling this goal is the professional development of teachers which are presented in various formats such as professional congresses and conferences, seminars, workshops, and college courses and through collaborative processes in both formal and informal settings. Also, educators, curriculum developers, and designers must prioritize and implement effective and sustainable professional development models (Karimnia & Salehi Zadeh, 2007). To ensure that the education system remains aligned with contemporary global trends and equips learners, teachers, and learning communities with a critical perspective for effective and up-to-date education.

This critical component of education, including language education, has been discussed and addressed by many scholars over the past few decades, some of whom we have outlined in chronological order. Hirsh (2005) emphasized the promotion of teachers' instructional strategies and postulated that fostering teaching methods and strategies during a continuous development program secures contemporary educational needs. Saphier et al. (2008) underlined professional development among many other important factors required for good schooling. Darling-Hammond et al. (2009) highlighted the integrity of regular education programs and teacher development programs and stated that professional development topics fail to employ activities and ideas in the classroom which enhances the outcomes.

The Journal Club Approach

According to Topf et al. (2017), journal club is not a newly emerged concept but a common practice in health-based education from one century ago. In fact, the journal club approach was devised for the purposes of promoting practice, critical reading, and keeping staff up to date with previously established and emerging literature. According to Evans et al. (2021), different methods and models of journal clubs applied in medicine education were revealed effective in assisting their members to improve their practice, and enhancing critical and creative thinking. Mawson (2022) describes the pedagogical journal club as a regular periodic gathering in which educational staff congregate to discuss an area of pedagogical interest informed by a group of leading publications in terms of journals and periodicals or other publication venues. Goetter (2009) had already stated that these professional and purposive gatherings include

components of active participation and action orientation while laying stress on the implications and applications to current practice in professional context. Besides, an emphasis is laid on the construction of professional learning which in turn results in both staff development and student achievement. The importance of collaborative learning as two cornerstones of journal club approach in the field of education has been evidenced by Wenger (1998) and Banchi and Bell (2008). In fact, journal club approach provides a useful framework to facilitate the merits of peer-based learning within a community of practice (Wenger, 1998).

Mawson (2022) has elaborated on the initial goals of journal club as professional development approach to include, a) facilitating the discussion and practice on critical and emerging educational subjects and issues aimed at enhancing pedagogical professional development of staffs, b) engendering the assistance from more significant others (here colleagues) to render colleagues capable of delivering changes and modifications in their professional practice, c) establishing a community of practice around intricate pedagogical discussions, issues, scholarship and newly reported research, d) integrating highly standard professional practice and grounded research aimed at extending and providing up-to-date pedagogical choices, e) obtaining informed interdisciplinary knowledge and engaging educational staffs in inter-disciplinary debates aimed at shedding light on the convergences and the divergences between disciplines, creating enhanced opportunities for new insights and practices conducive to learning and achievement and last but not the least, f) promoting education research, especially in pedagogy itself, to serve as an effective resource for innovation and an opportunity for dissemination of the standard practice.

Previously, Kennedy (2016) maintains that transformative practice through collaborative professional inquiry models of the journal club approach can be replaced with the illusion of action research just through the agency of collaborative professional inquiry. He added that every model and experience that entails an element of collaborative problem identification and subsequent problem-solving activity is effective in professional development (Kennedy, 2016). Mawson (2022) sheds more light on Kennedys' model of journal club and depicts that this model encompasses three main components of transmission, malleability and transformation the primary goal of which is increasing capacity for professional autonomy and teacher agency. These three components can be realized through a variety of forms and methods of professional development including training models, cascade models, coaching models, and collaborative inquiry models.

Related Studies on Teachers' Professional Development

Abakah (2023) explored teacher's learning within sustained professional development using a sociocultural perspective. Through in-depth interviews and non-participant observation of 16 junior high school instructors, he found that teachers learn via formal education, in-service training, and self-initiated learning. Reflective thinking and teaching played a crucial role, while factors such as school type, support quality, and class size influenced knowledge implementation.

Given the rise of virtual education, Meyer et al. (2023) examined online professional development's effectiveness from teachers' perspectives. Their study linked online

course quality to teacher satisfaction and professional growth. Findings indicated that online learning enhances cognitive activation, course structure, and moderate collaboration among participants. While all course quality aspects influenced teacher satisfaction, only cognitive activation and collaboration predicted professional practice improvements.

In an Iranian context, Shayesteh and Baleghizadeh (2023) used SEM to develop and validate a questionnaire on Iranian EFL teachers' perceptions of professional development. They identified four key factors: professional development activities, benefits, needs, and barriers. Their study emphasized the importance of understanding teachers' perceptions to inform stakeholders about effective professional development practices. Similarly, Ansyari et al. (2022) investigated teachers' preferences for online professional development among 330 Indonesian university-level English teachers. Results showed a strong preference for synchronous interaction and a negative perception of costly programs without certification.

In sum, reviewing the related literature suggests that scant research attention has been paid to constructing a validated scale for measuring EFL teachers' professional development, as the majority of studies have employed qualitative research designs. Accordingly, the current research employed a multi-method design to develop a model of EFL teachers' professional development derived from the journal club approach in the Iranian EFL context.

METHOD

Sampling and Participants

A multi-dimensional and multi-purpose sampling was used in this study. Because the design of the research was a multi-phase, multi-method one, in each phase, a different sample was needed. Accordingly, in each phase of the research, an appropriate number of participants were selected through appropriate sampling procedures, such as convenience and purposive samplings (Creswell, 2014; Teddlie & Yu, 2007). Regarding the feasibility and practicality concerns and the logic of quota sampling, the data were selected from four different provinces, almost based on availability from Southern, central, and northern Khorasan provinces as well as Tehran province from either medical faculties or humanities in both Azad and state-owned universities. Considering the very fact that the researcher decided upon convenience sampling, precise demographic characteristics of each are reported for each phase. Another important quality of sampling in this study was the embracement of all voices other than the teachers as mentors or learners in the professional development programs to include other related stakeholders too.

Expert Panel for Component Identification and Structural Interpretation

As depicted above, SEM proceeds in a way that the primary component identification stage integrates insights obtained from systematic review, documentary research, and those obtained from semi-structured interviews with a panel of experts which not only enrich the obtained data but also guide and inform them both iteratively. Thus, to this aim, 16 educational experts (10 from English language and linguistics departments in literature and humanity faculties and 6 assistant professors from medical universities)

were selected through non-random purposive sampling procedures to be interviewed for identifying the main components of the professional development model as integrated with journal club approach. Face validity and content validity of the developed model were also commented on by the panel. The demographic characteristics of this sample are represented in Table 1.

Table 1
Demographic characteristics of experts panel

N	Gender		Specialization			Location		Education	
	M	F	Teacher		Educational Manager	Tehran	Khorasan	PhD	M.A.
			Humanities	Medical					
16	11	5	8	6	2	2	6	7	1

Participants in Scales' Initial Piloting

Having identified an initial set of primary components and items for inclusion in the primary scale, an attempt is made in SEM to approve the primary scale for its content and face validity by number of participants, the initial piloting, aimed at evaluating the feasibility of the scale, was conducted. To this end, 50 participants, other than the main sample of the study, were selected for this purpose (pilot study) from a similar population. The demographic features of these participants are shown in Table 2.

Table 2
Demographic characteristics of initial piloting sample

Teachers (n=42)						Other Stake Holders (n=8)					
Gender		Education		Discipline		Gender		Education		Discipline	
M	F	MA	PhD	Lg	Med	M	F	MA	PhD	Lg	Med
25	17	15	27	35	7	8	0	2	6	7	1

Lg = Language Med= Medical Education

Participants in Scales' Reliability Calculation

A primary tenet of each research instrument and research finding is its reliability. In SEM and scale validation, the number of samples selected in each phase depends largely on the number of core concepts (items) that emerged in the primary qualitative phase (component identification). Regarding the criterion suggested by earlier studies (Shieh, 2014), a total number of 90 participants was selected for this stage. The demographic characteristics of the participants are shown in Table 3.

Table 3
Demographic characteristics of reliability estimation sample

Teachers (n=48)						Other Stake Holders (n=12)					
Gender		Education		Discipline		Gender		Education		Discipline	
M	F	MA	PhD	Lg	Med	M	F	MA	PhD	Lg	Med
32	16	17	31	38	10	11	1	3	9	10	2

Lg = Language Med= Medical Education

Samples of Sequential Exploratory and Confirmatory Factor Analysis

The main phases of scale validation and model construction stand in the need of a series of new participants. Literature review on factor analysis has indicated that sample size and its calculation quality are long discussed due to their weight and criticality because

sample size adopts a central role in determining the factorability of data, factor loading values, and latent factors extraction.

According to Mac Callum et al. (1999), factor analysis builds on the correlation matrix of the variables involved, and correlations usually need a large sample size for their precise establishment. In model construction studies in the field of language education (i.e. Salimi & Safarzade, 2019; Fathi, 2020) it is recommended to employ, at least, 5-10 samples for each variable. Taking these informing issues into account, the current study selected 150 participants for exploratory factor analysis, and 250 participants for confirmatory factor analysis because the latter is more sensitive to effect size. The demographic characteristics and distribution of these participants are reported in Tables 4 and 5:

Table 4
Demographic characteristics of exploratory factor analysis sample

Teachers (n=30)				Students (n=110)				Other Stake Holders (n=10)			
Gender		Education		Gender		Education		Gender		Education	
M	F	M.A≥	PhD	M	F	M.A	PhD	M	F	M.A≥	PhD
18	12	7	23	68	42	59	61	8	2	6	4

Lg = Language MA≥ = M.A and Lower

Table 5
Demographic characteristics of confirmatory factor analysis sample

Teachers (n=35)				Students (n=200)				Other Stake Holders (n=15)			
Gender		Education		Gender		Education		Gender		Education	
M	F	M.A≥	PhD	M	F	M.A	PhD	M	F	M.A≥	PhD
22	13	10	25	111	89	93	107	12	3	10	5

Lg = Language MA≥ = M.A and Lower

Instrumentation

Semi-structured interviews

Semi-structured interviews were utilized as the primary instrument for data collection, which aimed to construct and validate a model of Iranian language teachers' professional development based on the journal club approach. After reviewing the related literature (e.g., Coşgun & Savaş, 2023; Sato et al., 2022; Szucs et al., 2016; 2017), a series of interview questions were designed. Next, the questions were discussed by three external reviewers who were applied linguistics to ensure the clarity of each question. Additionally, to pilot the interview questions, they were given to four EFL teachers who were asked to provide their feedback regarding the legibility and preciseness of the questions. The interview sessions took about 60 minutes. To allow the participants to express their ideas easily, interview sessions were held in Persian. Through semi-structured interviews, a panel of experts engaged in discussions until theoretical saturation was reached, ensuring comprehensive coverage of the topic. The collected data were transcribed verbatim.

Procedure

Due to the fact that the present study adopted a multi-phase multi-method design, the overall procedure of the study was the formulation of a tentative model which was done through two phases followed by validation of the tentative model.

Component Identification

Component identification is aimed at steering the direction of the model-making process and arriving at a framework that serves as the backbone of the research. Component identification in SEM is an iterative and dynamic process that usually uses three instruments for data collection and analysis including a semi-structured interview with a panel of experts, a systematic literature review, and documentary research mainly analyzing the documents and other evidence related to the study (in the present study some organizational or institutional documents, guidelines, reports and rules for conducting professional development). The schematic representation of data collection is presented and discussed below:

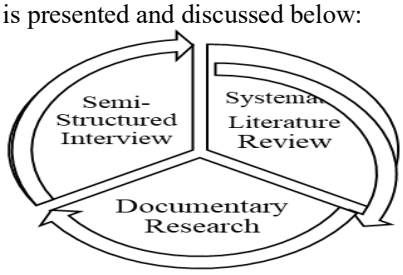

Figure 1
The iterative process of data collection in component identification phase

A semi-structured interview with experts was conducted to fulfill the objectives of the data collection stage. Each expert was interviewed in two different sessions, each lasting up to 45 minutes. In fact, the second session of each interview was followed by the questions and insights that emerged at the end of the first session. Each session was carefully audio-recorded. In the present research, the scope of the questions was determined before the interview; however, to ensure the flow of an in-depth investigation, strict adherence to the questions was avoided. Accordingly, each session started with a general question regarding the experts' perception of language teachers' professional development. In the case of experts in the medical discipline, the contribution of the journal club approach to general education was explored. According to the research strategy, the findings derived from the content analysis of the interviews steered the direction of the following literature review and documentary research iteratively and dynamically. Thematic analysis was conducted to analyze the qualitative data. This process starts with familiarizing oneself with the codes, categorizing similar codes to create the themes, and presenting related quotes for each emerging theme (Braun et al., 2022).

Also, the literature was reviewed systematically through which two primary goals were sought; firstly, reviewing and analyzing the possible existing standardized global scales, frameworks, and models of teachers' professional development, and secondly, arriving at a theoretical tentative framework for the model sought in this study by identifying core components and variables. This was the preliminary step for specifying the content of the questionnaire and arriving at the hypothesized model. In other words, the components identified in this stage were fed into the primary tentative (hypothesized) model.

Scale Development

The second stage of model construction in SEM is the development of a scale that is primarily of Likert type. Scale development includes multiple sub-steps including content selection from the identified component, item accumulation, and generation, which means turning the identified components into items, designing the rating scale, which is almost a Likert-type five-point questionnaire, and designing and specifying the instructions for filling out the scale. Using the tentative model identified in the previous stage, the contents and items selected or generated were put into a questionnaire. The items covering the hypothesized target domain (here the professional development construct based on the journal club) were selected from the relevant sources, mainly from a review of literature and expert interviews. After the development of the earlier scale, its accuracy, representativeness, and intelligibility were commented on by the panel of experts.

Model Validation

Model validation included initial piloting, reliability estimation, and sequential component analysis through exploratory factor analysis and confirmatory factor analysis was undertaken in the next phase. In initial piloting, a small-scale study was carried out to evaluate the feasibility of the research. This resulted in some modifications in the developed scale. Then, reliability estimation was run through Cronbach's alpha which estimates the internal consistency of the hypothesized model to ensure if all items measure the same underlying construct in a consistent order. Along with reliability estimation, face validity and content validity of the research was commented on by the panel of experts. Then, the climax of the current study that was construct validation was run via a two-stage process in two separate administrations in which exploratory and confirmatory factor analyses were run in the appropriate software.

FINDINGS

Research Question One

What are the Factors and Variables of the Primary Tentative Model of Iranian Language Teachers' Professional Development based on the journal club approach?

Results of Component Identification

Because model making in SEM starts with a qualitative phase in which components are identified, the present research chose a tripartite source for data collection including a systematic literature review, semi-structured interview with a panel of experts, and documentary research. Then these data underwent a content analysis and primary themes and sub-categories were identified.

The next step in model making was item accumulation from the pool of identified themes and sub-categories in the form of a Likert-type scale as the primary tentative model to be piloted and validated in the subsequent stages. Dornyei and Taguchi (2010) maintain that the earliest stage of questionnaire design and development begins with clarifying the research problem and identifying what critical concepts need to be inserted in the questionnaire. The primary qualitative phase of the research revealed that

the existing theoretical frameworks, models, and other tools and scales fail to explain the totality of Iranian language teachers' professional development in light of the journal club approach. Thus, an iterative process of data collection and analysis continued until theoretical saturation which then underwent content analysis. It was revealed that our primary hypothesized model entails six different dimensions including 1) *Theoretical issues* 2) *Content Area 3) Procedural issues, 4) Institutional Issues, 5) Affective and Perceptional Issues,* and *6) Instrumental Issues* as the primary components of Iranian language teachers' ideal model of professional development.

Based on this tentative model of professional development and consistent with the components identified, item generation and item accumulation were also conducted from content analysis of expert interviews, review of the literature, and considering earlier developed questionnaires in the literature. Despite that, some interdisciplinary and self-initiative items were also included in the primary scale. Aimed at generating clear and straightforward items, a simple language was chosen. Furthermore, taking into account the fact that a considerable number of the respondents were from medical education disciplines or language education managers and probably and may not have had sufficient proficiency to complete an English questionnaire, the scale was developed in Persian. While generating the items the instructions from Dornyei and Taguchi (2010) informed the process. Accordingly, it was attempted to avoid double-barrelled items that pose two or more questions. Also, identical and overlapped items were merged, and long and exhausting items were modified into shorter ones. The wording and organization of the primary scale were consulted with some outsiders, above all, the supervisor and advisors of the study controlled for representativeness, accuracy, and intelligibility. The shortest possible items were formulated while preserving the critical parts and central ideas to enhance the comprehensibility and ease of administration. Also, double-negative items were modified and reformulated to avoid any possible confusion. Finally, it was also endeavoured to reduce the time the questionnaire takes to be filled by the respondent because in SEM a great number of respondents participate in different stages of the model construction and validation.

Primarily, 67 items were generated; however, by applying these purifications and considerations, this pool of 67 items was reduced to 54 items representing the six dimensions depicted above, which formed the backbone of the hypothesized model that had manifested in the form of a Five-Point Likert questionnaire. The removal of items was based on the criterion suggested by Field (2013). Accordingly, the items with factor loadings less than 0.3 should be removed. These primary components and the number of their respective themes are presented in Table 6.

Table 6
Components and number of items in the tentative scale

Component	Description	Items
Theoretical	Denoting theories and approaches guiding and Informing PD	9
Content	Denoting materials and activities needed for PD	15
Procedural	Denoting skills and practices needed for PD	13
Institutional	Denoting scheduling and Organization support needed for PD	6
Perceptional	Denoting affective, attitudinal and motivational issues in PD	6
Instrumental	Denoting physical and technological requirements for PD	5

Note: PD = Professional Development

Informed by the guidelines of SEM, also being aware of the easy administration of a Likert scale, a five-point Likert-type scale was selected for the questionnaire ranging from "strongly disagree" to "strongly agree," coded from 1 to 5, respectively. In some items (e.g., "I believe teachers need to gain the ability to create value from knowledge through collaboration aimed at retaining, reusing, and expanding it."), reverse coding was performed to avoid negatively formulated items. A section for the instructions on filling out the questionnaire and some personal information was added to the scale while strictly assuring the respondent of anonymity and other ethical considerations.

The questionnaire development was illuminated by Dornyei (2002) wherein a very beginning step in the questionnaire construction process was that after item accumulation and formulation of the items pool, some external feedback is required to reduce the number of questions to the intended final number. Also, to avoid some deficiencies in the questionnaire, some steps were conducted. The researcher attempted to formulate short and sweet items without removing the critical parts of the central points. It was also attempted to reduce the time the questionnaire takes to fill. In addition to that, to evade confusion and ambiguity, double-negative items were attempted to reformulate.

Results of Initial Piloting and Reliability Estimation

Using the earliest group of participants discussed above, initial piloting was run and some linguistic and wording problems in some items were eradicated. Also, overlapping items were merged into one. As a result, 13 items were deleted from the scale and then, 41 remaining items were entered into the next stage. Then, reliability estimation was run because the next step in validating a scale is estimating its reliability. Reliability is an important rubric in SEM. The same weight is given to reliability in language assessment because it ensures the accuracy of measurements (Cheung et al., 2024). Thus, in SEM, in advance of sequential factor analysis, reliability estimation is run and items that are slightly correlated with the whole construct are possibly removed to enhance the overall reliability of the construct. In the following section, the quality of the reliability estimation of our tentative scale as well as its findings and values are represented in respective tables.

Since the present study followed the guidelines of SEM for scale construction and validation, the tentative scale was administered to the first groups of our participants and the obtained data were entered into SPSS (Version 23). It is worth explaining that the software results in two key pieces of information in the output of the correlation analysis which are the "correlation matrix" and "Cronbach alpha" if an item is deleted. These two sets of information inform the researcher on this fact that whether all items included in the tentative questionnaire measure the same underlying construct (here, Iranian language teachers' model of professional development).

The review of the literature reveals that a reliability coefficient of 0.70 or higher is statistically significant and therefore acceptable in SPSS.

In the present research, the primary pool of items after screening by experts and running of the pilot study was reduced to 41 due to semantic overlap, merging, double-barreled status, spelling mistakes, redundancy, etc., rather than statistical qualities. Then, the first version of the questionnaire was administered to pilot group participants, and the

obtained data were analyzed by SPSS (version 23). Assumptions of the correlation were met and negatively worded items underwent reverse coding through the "transform" tab in the software where they were changed into different reverse variables. The result of the questionnaire's reliability revealed that the alpha coefficient was 0.901 which denotes a strongly established correlation and therefore an acceptable index for the reliability of the scale (beyond the threshold of 0.70). Examining the output of the reliability estimation in SPSS correlation analysis showed that the totality of items contributes positively to the overall reliability of the developing model. These statistical findings for each item are represented in Table 7.

Table 7
Reliability estimation for each item (Item Total Statistics)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ITEM1	92.91	251.187	-.076	.903
ITEM2	93.21	261.173	-.252	.919
ITEM3	92.17	252.327	.016	.916
ITEM4	93.96	258.112	.091	.901
ITEM5	94.31	256.412	-.149	.903
ITEM6	93.29	231.012	.089	.906
ITEM7	93.98	248.993	.139	.910
ITEM8	93.11	251.001	.1209	.902
ITEM9	93.11	251.116	-.019	.902
ITEM10	93.62	249.531	.119	.903
ITEM11	93.11	250.872	.034	.902
ITEM12	94.38	45.917	.334	.901
ITEM13	94.41	251.922	-.111	.904
ITEM14	94.11	253.531	-.029	.906
ITEM15	93.21	246.998	.101	.905
ITEM16	93.88	2553.103	-.049	.908
ITEM17	94.17	252.132	.013	.902
ITEM18	93.91	238.121	.276	.901
ITEM19	94.53	248.121	.304	.903
ITEM20	94.43	257.113	-.344	.905
ITEM21	94.12	246.432	.256	.904
ITEM22	94.12	251.004	.173	.903
ITEM23	94.12	251.343	.134	.903
ITEM24	94.12	252.717	-.097	.906
ITEM25	94.31	249.567	.076	.903
ITEM26	94.53	250.712	.121	.902
ITEM27	94.76	251.123	.134	.904
ITEM28	94.13	252.126	.013	.905
ITEM29	94.76	251.004	.127	.903
ITEM30	94.76	249.997	.134	.902
ITEM31	93.45	239.889	.237	.906
ITEM32	94.23	233.995	.883	.899
ITEM33	94.41	233.891	.832	.883
ITEM34	94.45	240.993	.539	.901
ITEM35	94.49	241.201	.539	.901
ITEM36	94.51	241.201	.547	.900
ITEM37	94.54	242.765	.534	.895
ITEM38	94.62	254.229	-.129	.904
ITEM39	94.56	241.212	.545	.901
ITEM40	94.36	240.312	.549	.901
ITEM41	94.48	250.239	.082	.903

Furthermore, the estimate of reliability for each distinctive component was figured out separately that are represented in Table 8.

Table 8
Reliability estimates for each distinctive component

Component	Items	R
Theoretical	1-7	0.89
Content	8-14	0.91
Procedural	17-23	0.90
Institutional	24-30	0.89
Perceptional	31-35	0.90
Instrumental	36-41	0.93

To sum up the findings pertaining to the first questions of the research, the results of component identification, item generation, scale development, initial piloting and reliability estimation in the primary phase of the research showed that our tentative model of Iranian language teachers' professional development based on journal club approach entailed six primary components encompassing 41 reliable variables all contributing positively to the overall reliability of the tentative scale. Also, it was revealed that each component reveals an acceptable estimate of reliability all above the threshold of acceptance value for each component (r=0.60, at least) as determined by literature (Dornyei, 2010). It is ultimately concluded that our primarily constructed scale is internally consistent and therefore reliable.

Results of Research Question Two

Is the Tentative Developed Scale a Valid Measure of Iranian Language Teacher's Professional Development Construct?

After the construction of the primary scale, the next phase is devoted to its validation which is usually carried out through sequential exploratory factor analysis.

Exploratory factor analysis is carried out through factor reduction and reduces a huge set of data into a smaller set of summary variables that explain the variance in original variables.

The findings of the exploratory factor analysis are reported in Table 9.

Table 9
Results of KMO and bartlett's test for sample adequacy and factorability of data set

KMO Measure of Sampling Adequacy	0.801	
Bartlett's Test of Sphericity	App Chi-Square	8011.293
Df	567	
Sig	0.002	

Pallant (2007) asserts that the value of Kaiser-Meyer-Olin index usually ranges between zero (0) and one (1), yet the values above 0.6 are acceptable indicators for the realization of the assumption of sampling adequacy. For the sake of the current study, the value of KMO measure for sample adequacy was reported as 0.798 which is acceptable and beyond. Also, the value of Bartlett's test for sphericity is reported under 0.05 (p = 0.002) which is an acceptable indicator of a significant value, that according

to the literature review, resides in the range of 0.05 and below. A larger significant value indicates that the data do not produce an identity matrix and are not normal and acceptable for further analysis in multivariate studies (Pallant, 2013). In this study, both of the conditions for factorability were met. Taking these assumptions into account, the principal component analysis was run in SPSS. The following results were reported starting from a scatterplot figure (See Figure 2) that not only informs the assumption of linearity but also reveals some findings regarding the factor extracted in the study.

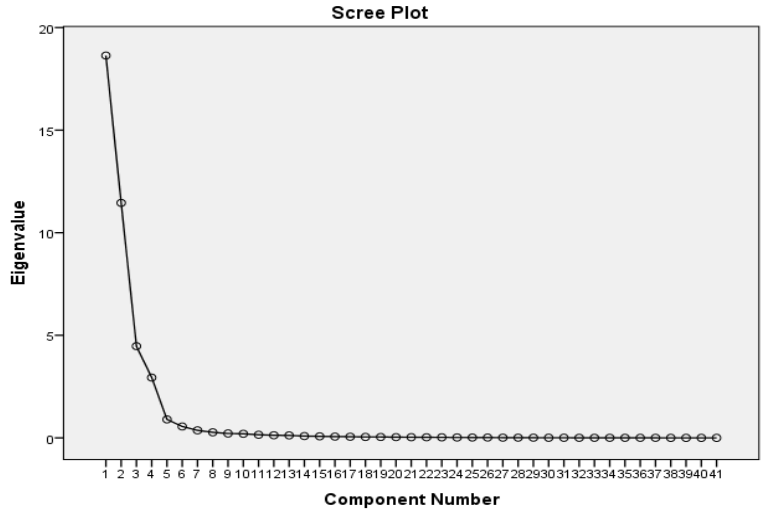

Figure 2
Scatter plot of principal component analysis for teachers' professional development model

This plot reveals that based on Eigenvalue (N≥ 1), four different factors and components are extracted from the data. The detailed variance of each factor (component) is shown in Table 10. According to Tabachnick and Fidell (1996), the Eigenvalue greater than 1 represents a factor that is indicated by a node in the scree plot. This means that in our current model, only 4 factors explain more than 91 percent of the variance in the data.

Table 10
Variance explained and components extracted (Based on PCA)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	18.634	45.450	45.450	18.634	45.450	45.450	18.439	44.972	44.972
2	11.454	27.936	73.386	11.454	27.936	73.386	11.431	27.881	72.853
3	4.470	10.903	84.289	4.470	10.903	84.289	4.498	10.970	83.823
4	2.938	7.165	91.454	2.938	7.165	91.454	3.129	7.631	91.454
5	.898	2.191	93.645						
6	.554	1.352	94.997						
7	.366	.892	95.888						
8	.270	.657	96.546						
9	.214	.522	97.067						
10	.198	.484	97.551						
11	.152	.371	97.922						
12	.127	.309	98.231						
13	.121	.294	98.525						
14	.086	.211	98.735						
15	.075	.184	98.919						
16	.063	.155	99.074						
17	.056	.136	99.210						
18	.046	.112	99.322						
19	.044	.108	99.430						
20	.034	.084	99.514						
21	.032	.078	99.592						
22	.028	.067	99.659						
23	.026	.064	99.724						
24	.019	.047	99.771						
25	.018	.044	99.815						
26	.014	.035	99.850						
27	.011	.028	99.878						
28	.010	.024	99.902						
29	.008	.019	99.921						
30	.006	.016	99.936						
31	.006	.014	99.950						
32	.005	.011	99.962						
33	.004	.010	99.972						
34	.004	.009	99.981						
35	.003	.008	99.989						
36	.002	.005	99.994						
37	.001	.003	99.996						
38	.001	.002	99.998						
39	.001	.001	100.000						
40	8.111E-5	.000	100.000						
41	-2.602E-18	-6.347E-18	100.000						

As shown in Table 10, the number of extracted components based on Varimax rotation that possess an Eigenvalue of 1 and beyond are four factors that are two factors

(components) lesser than our tentative model explained above in the first phase of the study because exploratory factor reduction reduced factors into 4. Additionally, this table reveals that these four extracted factors explain 91.2 percent of the total variance. In Table 11 the results of the rotated measures are shown which subsumes items under their respective component.

Table 11
Rotated component matrix based on varimax rotation with kaiser normalization

	1	2	3	4
ITEM1	.932			
ITEM2	.826			
ITEM3	.432			
ITEM4	.971			
ITEM5	.923			
ITEM6	.768			
ITEM7	.445			
ITEM8	.901			
ITEM9	.873			
ITEM10	.895			
ITEM11		.993		
ITEM12		.995		
ITEM13		.889		
ITEM14		.988		
ITEM15		.989		
ITEM16		.795		
ITEM17		.490		
ITEM18		.987		
ITEM19		.969		
ITEM20		.975		
ITEM21		.967		
ITEM22		.501		
ITEM23		.975		
ITEM24		.981		
ITEM25		.980		
ITEM26			.089	
ITEM27			.078	
ITEM28			.093	
ITEM29			.051	
ITEM30			.085	
ITEM31			.078	
ITEM32			.984	
ITEM33			.953	
ITEM34				.954
ITEM35				.875
ITEM36				.397
ITEM37				.917
ITEM38				.937
ITEM39				.912
ITEM40				.980
ITEM41				.923

Point: The number of items is reordered in each component for straightforwardness

Table 11 clearly indicates how these 41 items are distributed along these four components. It is revealed that Varimax rotation has reduced the number of factors (components) from six factors in our earlier tentative model into four distinctive

components. It is seen that items 1-10 (reordered in the scale) belong to the first component called the "Theoretical-Ideational" component, items 11 to 25 belong to the second component called the "Instructional-Procedural" component, items 26 to 33 belong to the third component called the "Organizational-Structural" component and finally, items 34 to 41 belong to the fourth component called the "Attitudinal–Perceptional". The name of each component or factor was selected according to the nature of the items piled up under each component. Another set of information presented in Table 11 is the items the factor loading of them downsized the acceptability threshold established above (i.e. 0.6 and above). Thus, these items were deleted from the final model. In sum, the final extracted model of Iranian language teachers' professional development embraced 4 factors and 35 variables the descriptions of which are presented in Table 12.

Table 12
Extracted factor and variables of Iranian language teachers 'professional development

Component	Item No	Variable
Theoretical-Ideational	1	Action Research
	2	Reflective Practice
	3	Critical Thinking
	4	Constructivist Andragogy
	5	Post-Method Doctrine
	6	Knowledge-Leadership
	7	Flipped Instruction
	8	Transformative Learning
Instructional- Procedural	9	Active Learning
	10	Rapport Building
	11	Self-Directed Learning
	12	Experiential Learning
	13	Negotiated Curriculum
	14	Scaffolding Instruction
	15	Collaborative Learning
	16	Supportive Resource
	17	Assessment Literacy
	18	Glocal Syllabus
	19	Virtual Literacy
	20	Learner Ascendance
	21	Evidence-Based Content
Organizational-Structural	22	Organizational Might
	23	Policy Alignment
	24	Budgeting & Provision
	25	Certificating & Promotional Incentives
	26	Coherent-Sustained Programming
	27	Course Appraisal
	28	Collective Goal-Setting
Attitudinal-Perceptional	29	Positioning
	30	Intrinsic Motivation
	31	Engagement
	32	Empowerment
	33	Voice and Agency
	34	Situated Cognition
	35	Mental Orientation

As depicted in Table 12, these 35 variables are the validated components of the model that were intended by the current research.

The description of each variable in each component is described separately in Table 13.

Table 13
Variables of the "theoretical-ideational" component and their description

Variable	Description
Action Research	Teachers need to learn to engage in continuous research and find solutions for their own local problems by bridging theory and their own practice
Reflective Practice	Teachers need to learn to think about their own teaching after each class and use its results to modify their belief, method, and practice
Critical Thinking	Teachers need to learn skills of conceptualization, analysis, synthesis, and evaluation of their own teaching and the overall educational system
Constructivist Andragogy	Teachers need to learn tenets of the construction of knowledge as opposed to traditional views of learning and the differences between pedagogy and andragogy
Post-Method Doctrine	Teachers need to learn the tenets of particularity, practicality, and possibility while employing or devising a teaching method
Knowledge-Leadership	Teachers need to gain the ability to create value from knowledge through collaboration aimed at retaining, reusing, and expanding it.
Flipped Instruction	Teachers need to become familiar with tenets of inverted instruction and blended learning to increase engagement and exposure beyond the class
Transformative Learning	Teachers need to learn the skills for replacing transmitting knowledge with transforming knowledge in learners

The categories and related items shown in Table 13 have been initially driven through thematic analysis of the transcribed interviews.

In order to calculate and control the fit index of the extracted model, confirmatory factor analysis (CFA) was run sequentially. Costa and Sarmento (2017) describe confirmatory factor analysis as a statistical procedure in humanities research that estimates the consistency of measures of a construct that informs the researcher about the nature of that construct (in the case of the current research, the extracted model of Iranian language teachers' professional development). It is worth noting that this kind of factor analysis confirms whether the number of factors or constructs as well as the loadings of observed variables conform to what is expected on the basis of theory (Malhotra et al, 2007).

This statistical procedure has the capability of examining the construction of two types of models involving measurement model and structural model which is the one sought in our study. In sum, confirmatory factor analysis investigates the factor structure of a construct and its indicators by calculating some parameters such as fit indices and modification indices.

Shedding more light on sequential component analysis Fur (2011) asserts that three steps are run including identifying the number of factors or latent variables represented by ovals in the hypothesized model that underlie the scale's items, shown by rectangles, identifying the way these items in the model are connected to each factor and specifying the possible associations between factors. To these three aims and deriving the final model, our final sample of participants was chosen and the final extracted scale was administered then its results were analyzed through SPSS and AMOS add-on where the

degrees of the model fit were estimated. Both absolute and relative fit indices were calculated which are represented in Table 14.

Table 14
Fit measures for the extracted model of Iranian language teachers' professional development

Index	Current Level	Accepted Level	Conclusion
Chi-Square (X^2)/df	1.03	<3	Good
NFI	0.91	≥0.90	Fair
GFI	0.91	≥0.90	Good
CFI	0.90	≥0.90	Good
RMSEA	0.04	<0.05	Good

As indicated in the Table 14, the values obtained show that the Chi-squared test (estimating the difference between observed and expected covariance matrices), Normed Fit Index (estimating the inconsistency between the chi-squared value of the proposed model and the chi-squared value of the null model), Comparative Fit Index (estimating the model fit by calculating the inconsistency between the data and the hypothesized model) and Root Mean Square Error of Approximation (correcting the tendency of chi-square statistics to reject model) submit evidence on the confirmation of the extracted model. This reveals that all the values obtained were at the acceptable level which is very good for a newly constructed model. This means that the data collected from the 250 participants in confirmatory factor analysis, support the model previously explored in exploratory factor analysis. Figure 3 is the schematic representation of the final validated model of Iranian language teachers' professional development.

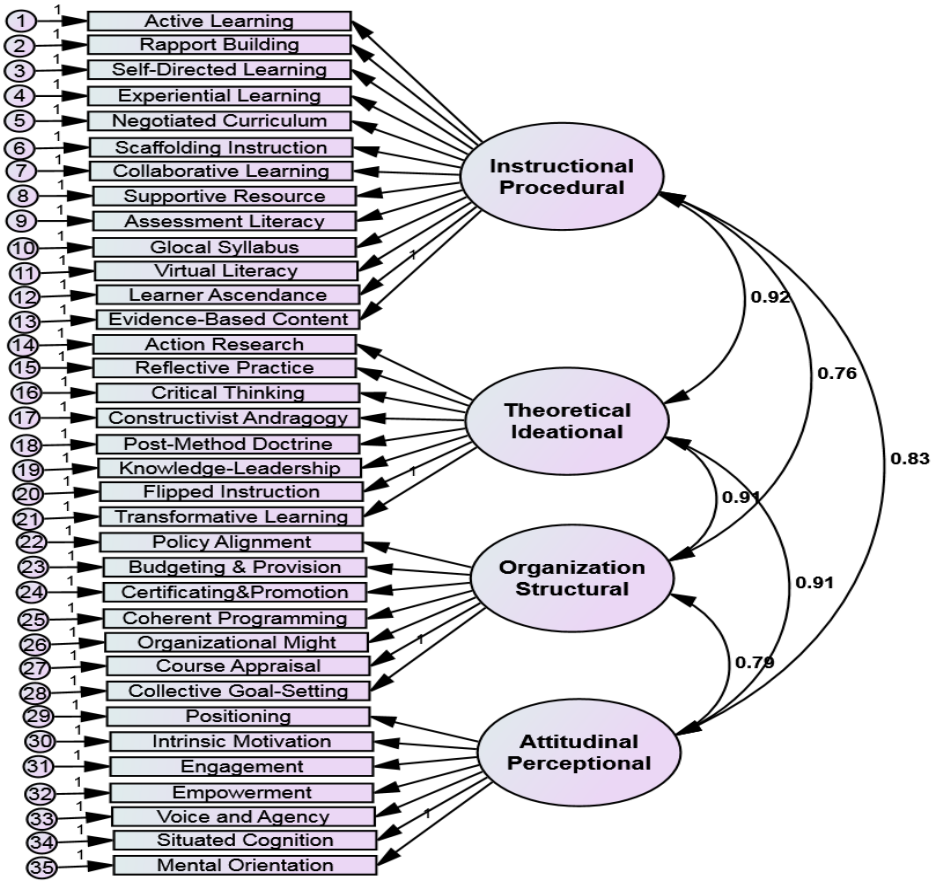

Figure 3
Validated model of iranian language teachers' professional development

As depicted in Figure 3, factors, variables, and coefficient pathways from each latent variable to other latent or observable variables are represented in the model of Iranian language teachers' professional development. The value obtained from the coefficient pathways, as represented in the arrows in the figure, submit further proof of the validity of the model and the strength of correlation between the variables. This statistical evidence shows that the model is likely to resist any extraneous variable from identical or even non-identical educational contexts. Despite this very fact, further research and replications are needed to remove possible uncertainties that result in an all-inclusive model of language teachers' professional development. In other words, the current constructed and validated model can be expanded, reconfigured, and modified by seeking a more rigorous theoretical saturation approach during component identification or entering larger samples during data analysis.

DISCUSSION

The present study aimed to validate a model of professional development in the country that not only guides and informs need analysis, curriculum development, administration, and evaluation of these programs in the country but also informs researchers in the discipline for methodological innovations and new research methods and approaches. It was found that four core factors along with 35 critical variables are involved in a desired professional development in the country. The factors include instructional procedural aspect (i.e., teaching skills and practices needed for professional development), theoretical ideational aspect (i.e., knowledge of theories and principles of teaching), organization structural aspect (i.e., organization-related issues which influence teachers' professional development), and attitudinal perception aspect (i.e., teachers' understanding of and tendency toward professional development chances). It was also found that each variable has a distinctive nature and therefore, adopts a particular role in the model which enlightens educational policy and decision-makers to modify the model by manipulating the most appropriate one.

These findings support Tabatabaee-Yazdi et al. (2018) who reported that an appropriate professional development program exerts an impact on teachers' success in their educational career to a significant extent because it affects decision-making, collaborating, reflecting, and updating content knowledge and skill development. Among these variables, it was reported that collaboration among teachers in its different methods as well as updating teachers' knowledge and skills during professional development enjoy the highest factor loading in a construct of professional development approached in the study (Tabatabaee-Yazdi et al., 2018; Xu, 2015). Among the variables reported as critical in professional development, collaboration has a special position and is frequently discussed in the literature.

Another element that was highlighted in our model of professional development was reflective practice which is itself a distinctive research discipline in applied linguistics and above all in language teaching. Reflective practices can help improve professional development through observing, analysing, and reflecting on teachers' instructional practices (Belvis et al., 2013). This finding is identical to Hagen, Loughran, and Russell (2006) in a foreign context that asserts that integrating reflective practice into professional development programs is positively correlated with many subsequent knowledge, and skills related to effective teaching practices and strategies. Cooperative learning and peer scaffolding in educational practice stem from the combined influence of collaboration and reflective practice (Cajkler et al., 2015). Also, according to Johnson and Golombek (2011) collaboration integrated with scaffolding and mediation helps novice and even experienced teachers resolve the paradoxes they encounter when participating in a professional development course wherein the content and skill taught contradict their previous experience and practice. In other words, this is known as the re-conceptualization stage in professional development. At the re-conceptualization a stage, participants learn not only to adopt new content and skills but also to adapt and re-organize their new learning to the recent situation. In addition, they try to contextualize their learning or implement their new knowledge in the actual educational setting.

CONCLUSION

To answer the research question, SEM was selected as the primary procedure for arriving at a tentative model of professional development based on the journal club approach. Three sub-procedures were carried out to collect data through semi-structured interviews, documentary research, and systematic literature review. These steps resulted in a collection of data which were organized, transcribed, and prepared for content analysis. The prepared data underwent content analysis and some themes emerged that then were classified into their respective categories. Primarily 67 items were generated, however, applying some linguistic purifications and considerations, a pool of 67 items was reduced to 54 items representing the six dimensions that formed the backbone of our hypothesized model. These primary components and the number of their respective include "theoretical dimension" denoting theories and approaches guiding and informing teacher professional development entailing nine items, "content dimension", denoting materials and activities needed for teacher professional development entailing fifteen items, "procedural dimension" denoting skills and practices needed for teacher professional development entailing thirteen items, "institutional dimension" denoting scheduling and organization support needed for teacher professional development entailing six items, "perceptional dimension" denoting affective, attitudinal and motivational issues in teacher professional development entailing six items and " instrumental dimension" denoting physical and technological requirement for teacher professional development entailing five items.

As for pedagogical implications, it can be said that there are a number of advantages associated with model development in education research because it provides a comprehensive image of the phenomenon under the study by elucidating the variables involved. In addition to that, the development of the method for the purpose of educational conceptualization is necessary. Local knowledge and practice were required to be taken into account to delve into the depth of professional development for language teachers as undertaken in the model. Also, it was crucial to use insights from other successful disciplinary attempts. Such a theoretical conceptualization of the variables involved in educational development could bring about a number of tangible implications not only for teachers and learners but also for educational policymakers, curriculum developers, and syllabus writers. From educational managers' and policy makers' perspectives, this interdisciplinary model helps explore the way issues and problems of an educational system in professional development can be addressed and how different parts of the educational system need to work together to find solutions to encountered problems for professional development.

Further studies can be carried out: Replicating this study in other EFL contexts to explore the model's applicability and adaptability across different educational systems; Investigating the long-term impact of the validated PD model on teacher performance and student outcomes; Expanding the model to include additional variables, such as cultural dimensions, to better understand their influence on PD; and Exploring the integration of emerging technologies, such as artificial intelligence, into the journal club approach to further enhance teacher engagement and learning outcomes.

Taken all together, the model developed in this study is the first model of language teachers' professional development that not only enjoys methodological innovations but also draws insights from the disciplines of medical and nursing education in terms of journal club theory and practice. Thus, it can serve as a scientific and context-embedded model to be used by future researchers in the field of professional development in language and education. Additionally, the model elucidates the viewpoints of practitioners on the quality, quantity, duration, and other elements of standard professional development for language teachers in the country.

REFERENCES

Abakah, E. (2023). Teacher learning from continuing professional development (CPD) participation: A sociocultural perspective. *International Journal of Educational Research Open, 4*, 1-11. https://doi.org/10.1016/j.ijedro.2023.100242

Afshar, H. S., & Doosti, M. (2022). Implementing and evaluating a peer-coached EFL teacher professional development program. *Evaluation and Program Planning, 92*, Article 102096. https://doi.org/10.1016/j.evalprogplan.2022.102096

Ansyari, M. F., Groot, W., & De Witte, K. (2022). Teachers' preferences for online professional development: Evidence from a discrete choice experiment. *Teaching and Teacher Education, 119*, 103870. https://doi.org/10.1016/j.tate.2022.103870

Banchi, H., & Bell, R. (2008). The Many Levels of Inquiry. *Science and Children, 46*(2), 26-29.

Beauchamp, C., & Thomas, L. (2009). Understanding teacher development: A case study approach. *Learning in Health and Social Care, 8*(2), 74-83.

Borg, S. (2015). *Teacher cognition and language education: Research and practice*. Bloomsbury.

Braun, V., Clarke, V., & Hayfield, N. (2022). 'A starting point for your journey, not a map': Nikki Hayfield in conversation with Virginia Braun and Victoria Clarke about thematic analysis. *Qualitative Research in Psychology, 19*(2), 424-445.

Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2024). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal of Management, 41*(2), 745-783. https://doi.org/10.1007/s10490-023-09871-y

Coşgun, G. E., & Savaş, P. (2023). Professional identity development of English teachers: A data-driven model. *Review of Education, 11*(1), Article e3394.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Sage Publications.

Darling-Hammond, L. (2012). *Powerful teacher education: Lessons from exemplary programs.* San Francisco, CA: John Wiley & Sons.

Darling-Hammond, L, Wei, R. C, Andree, A., Richardson, N., & Orphanos, S. (2009). State of the profession study measures status of professional development. *Journal of Staff Development*, *30*(2), 42-44.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.

Ding, X., Wang, L., & Kong, L. (2023). The impact of local versus nonlocal professional development programs for teachers: Evidence from China's national teacher training project. *SAGE Open*, *13*(2), https://doi.org/21582440231184853.

Dornyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research: Construction, administration and processin*g (2nd ed.). New York: Routledge.

Field, A. (2013). *Discovering Statistics using SPSS* (4th ed). London: SAGE.

Gershenson, S., & Baugh, A. (2023). The role of teacher effectiveness in predicting future employment and education outcomes. *Educational Research Review, 16*(2), 213-231.

Goetter, M. C. (2009). *An Educational intervention to develop characteristics of transformational leadership in novice nurse managers*. [Unpublished PhD Dissertation, University of Northern Colorado, Colorado].

Hirsh, S. (2005). Professional development and closing the achievement gap. *Theory into Practice, 14*(1), 38-44. https://doi.org/10.1207/s15430421tip4401_6

Karimnia, A., & Salehi Zadeh, S. (2007). Communication strategies: English language departments in Iran. *Iranian Journal of Language Studies, 1(4),* 287-300.

Kennedy, M. M. (2016). *How does professional development affect teaching?*. Review of Educational Research, *86*(4), 945–980. https://doi.org/10.3102/0034654313480241

Khosravani, M., Rostamian, M., Ashraf, H., & Motallebzadeh, K. (2022). A structural equation modeling of English tests' social and educational consequences: exploring target, leverage, risk, and critical variables. *Language Testing in Asia, 12*(1).

Mackey, A., & Gass, S. M. (2016). *Second language research: Methodology and design*. Routledge.

Mawson, K. (2022). *Pedagogic Engagement with Literature: How a Pedagogic Journal Club became a Higher Education Community of Practice*. Unpublished PhD Dissertation, Warwick, University of Warwick.

Meyer, A. Kleinknecht, M & Richter, D. (2023). What makes online professional development effective? The effect of quality characteristics on teachers' satisfaction and changes in their professional practices. *Computers & Education, 200*, 1-12.

Nichols, P. D., & Williams, N. (2009). Consequences of test score use as validity evidence: Roles and responsibilities. *Educational Measurement: Issues and Practice, 28*(1), 3–9. https://doi.org/10.1111/j.1745-3992.2009.01132.x

Sachs, J. (2016). Teacher professional development: The need for new approaches. *Australian Educational Researcher, 43(*2), 199–217. https://doi.org/10.1007/s13384-016-0226-9

Saphier, J., Haley-Speca, M.A., Gower, R. (2008). *The skillful teacher: Building your teaching skills*. Acton, MA: Research for Better Teaching, Inc.

Sato, K., Mutoh, A. N., & Kleinsasser, R. C. (2022). Longitudinal research on EFL teacher professional development in (Japanese) contexts: Collaborative action research projects. *Language Teaching Research, 26*(3), 477-503.

Shayesteh, L., & Baleghizadeh, S. (2023). Construction and validation of Iranian EFL teachers' perceptions of professional development questionnaire. *Language Related Research, 14*(1), 113-143.

Shieh, G. (2014). Sample size requirements for the design of reliability studies: Precision consideration. *Behavioural Research Methods, 46*, 808–822. https://doi.org/10.3758/s13428-013-0415-1

Sipman, G., Martens, R., Thölke, J., & McKenney, S. (2021). Professional development focused on intuition can enhance teacher pedagogical tact. *Teaching and Teacher Education, 106*, 103442. https://doi.org/10.1016/j.tate.2021.103442.

Szucs, K. A., Benson, J. D., & Corturillo, A. (2016). Use of a journal club for professional development: Outcomes in a school-based occupational therapy practice. *Journal of Occupational Therapy, Schools, & Early Intervention, 9*(2), 208-219.

Szucs, K. A., Benson, J. D., & Haneman, B. (2017). Using a guided journal club as a teaching strategy to enhance learning skills for evidence-based practice. *Occupational Therapy in Health Care, 31*(2), 143-149. https://doi.org/10.1080/07380577.2016.1278296

Tabatabaee-Yazdi, M., Motallebzadeh, K., Ashraf, H., & Baghaei, P. (2018). Continuing professional development strategies: A model for the Iranian EFL teachers' success. *SAGE Open, 8*(1), https://doi.org/10.1177/2158244018764234

Teddlie, C., & Yu, F. (2007). Mixed methods sampling: A typology with examples. *Journal of Mixed Methods Research, 1*(1), 77-100.

Topf, J. M., Sparks, M. A., Phelan, P. J., Shah, N., Lerma, E. V., Graham-Brown, M. P. M., Madariaga, H. Iannuzzella, F., Rheault, M. N., Oates, T., Jhaveri, K. D. and S., H. (2017). "The Evolution of the Journal Club: From Osler to Twitter." *American Journal of Kidney Disease*, *69*(6), pp. 827–836.

Xu, H. (2015). The development of teacher autonomy in collaborative lesson preparation: A multiple-case study of EFL teachers in China. *System, 52*, 139-148.

Warren, C.A. (2016). *A Comparison of Professional Development Needs of Beginning Teachers in West Virginia Schools*. (Unpublished PhD dissertation. Marshal University).

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.

Wright, T. (2010). *Second language teacher education: A sociocultural perspective*. Routledge.