



## The Level of Teachers' Reflection: A Systematic Literature Review

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The importance of reflection and reflective practice as regards teaching procedures are frequently noted in the literature; indeed, reflective ability is regarded by many educational scholars as an essential skill of teacher professional competence and development. The present study constitutes a systematic review of relevant existing literature, with the purpose to understand the level of teachers' reflection that has already been examined, recorded and reported by researchers, constituting thus a fundamental basis on which further investigation and examination should take place. Three databases (Eric, Taylor & Francis and Scopus) were searched for empirical peer-reviewed journal articles. Articles retained using inclusion and exclusion criteria were coded based on their sample characteristics, reference to theoretical or conceptual frameworks, reading processes and abilities measured, and included predictors of reading. To conduct the study, the PRISMA procedure was followed. Thirteen sources were included in the final systematic review. The results confirm that educational research regarding the level of teachers' reflection is not yet extensive, as many studies were approached only through qualitative methodology. Furthermore, many of them examined the level of pre-service teachers, while their findings showed that teachers exhibited reflective abilities to lower levels. This highlights the need for further research on in-service teachers, along with the integration of structured reflection activities to foster deeper and more critical reflective practices.

Keywords: level of reflection, reflective practice, school teachers, systematic literature review, PRISMA procedure

### INTRODUCTION

As regards the majority of educational systems around the world –Greece's included–, teacher reflection constitutes either a fully unspecified and incomprehensible or, at best, a poorly examined and minimally defined scientific notion, even though almost every teacher is involved (more or less consciously) in relevant procedures every day and every time s/he finishes his/her teaching in a real classroom (Voulgari & Koutrouba, 2022). Throughout the literature the term teacher reflection and, consequently, reflective practice is being used to describe practices ranging from analyzing a single

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aspect of a lesson to considering the ethical, social and political implications and impact of teaching practice (Larrivee, 2008).

The ability of reflection is obviously linked to the willingness of a person, and in particular -as regards educational process- of a professional teacher, to change, to evolve and even transform him-/herself in a deep, conscious and meaningful way after re-examining with open mind and sincerity his/her own experiences, and especially the unpleasant ones, that s/he has acquired during teaching. During this process a professional teacher intervenes intentionally and in a more effective way in his/her own way of teaching so as to discover and design new, more flexible pathways and implement less linear teaching practices in order to facilitate learning processes and to avoid repetition of ineffective learning practices (Bozkurt & Yetkin-Özdemir, 2018; Denton & Ellis, 2020; Farrell, 2008; 2013; Halquist & Musanti, 2010; Koutrouba et al., 2020; Lengeling & Pablo, 2016; Voulgari & Koutrouba, 2020). The teacher who actually wants to experience a meaningful professional change has to reflect on painful professional experiences, to accept his/her own mistakes and to take responsibility for them. This might involve, in some cases, apologizing to students, parents and colleagues, or even undergoing and affectively enduring a reduction in his/her personal egoism and self-centeredness (Voulgari & Koutrouba, 2021).

In fact, reflection is derived from a socio-affective ability of the teacher to adapt to new conditions and perceptual data, to show flexibility, and to demonstrate personal values such as honesty, authenticity, self-control and, in many cases, moral bravery. As long as a teacher does not already have or develop in the course of time such socio-affective abilities, traits and personal values, the process of reflection is expected to be insufficiently developed and unfruitfully utilized (Voulgari & Koutrouba, 2021).

### **Literature review**

The concept per se as well as its multiple connotations and aspects have not yet been fully defined while they remain rather obscure and highly experiential in different educational systems around the world and during different periods of examination (Voulgari & Koutrouba, 2021). As a result, a generally accepted terminology which could define precisely the various levels of the development of reflective practice (Larrivee, 2008) has not yet been proposed or recorded, a fact that, firstly, confirms the lack of scientific consensus about what the construct of reflection actually entails (Hatton & Smith, 1995; Rodgers, 2002) and, secondly, suggests a need for a widely accepted and uniformly implemented descriptive terminology.

Indeed, to facilitate the evaluation and the promotion of reflection (Larrivee, 2008; Liakopoulou, 2012), various classifications have emerged in international literature (Hatton & Smith, 1995; Lee, 2005; Schön, 1987; Van Manen, 1977). As a matter of fact, in the international literature innumerable definitions of "reflection" can be found since, around the world, relevant perceptions of terms and notions regarding reflection are often expressed rather vaguely, while the experiences of the teachers, as regards the phenomenon of reflection, are rather confusing (Voulgari & Koutrouba, 2021). Several studies have developed measures of reflective practice or aspects of reflection. Reflection, as theoretical conceptualization that can be practically implemented in measurable and assessable real-classroom teaching procedures, is often defined in terms

of levels. In this study, the working classifications of reflection that this research has concluded will be summarized below. The presentation of the classifications that follow makes it obvious that wide differentiations of definitions and levels of reflection emerge in the international literature (Voulgari et al., 2024).

The earliest attempts to define levels of reflection were made by Van Manen (1977) who proposed a hierarchical representation of three types and corresponding levels of teacher reflection, namely technical, practical, and critical reflection. According to Van Manen (1977), technical rationality is simply the description of an event relying on casual personal experience without due regard for a systematic theory that could profoundly analyze and persuasively explain this cognitive and affective process.

As a following and higher-ranked level, practical action moves beyond technical rationality by incorporating a system or theory that involves a more meaningful description of an event which also includes the teacher's feedback evaluative reasoning which follows decisions made (e.g., why did I do this? / I should/should not have done this). The third level of Van Manen's theory (1977), namely critical reflection, incorporates moral and ethical criteria for the evaluation of personal teaching experiences and, also, includes the fruitful utilization of other teachers' experiences to systematically examine any phenomenon that was developed within the classroom (Zeichner & Liston, 1987). At this level, teachers put in question their own goals, activities and their underlying assumptions, integrate the moral and ethical dilemmas to reflect on the larger context where all learning is taking place and question their stance in light of the ultimate purpose of schooling (Van Manen, 1997; Larrivee, 2008).

Almost two decades after Van Manen, Hatton and Smith (1995), categorized reflection using a hierarchical structure involving different levels of reflection. More specifically, descriptive writing, descriptive reflection, dialogic reflection and critical reflection were identified. Descriptive writing includes facts and decision-making based on the teacher's personal thinking and concerns, without any attempt to justify the facts. Descriptive reflection constitutes an attempt of the teacher to provide rational reasons based often on personal judgement. The next type, dialogic reflection, is considered to be a form of discourse with one's self, an exploration of possible reasons for having or not having done something during the teaching process. Finally, critical reflection is defined by Hatton and Smith (1995) as an intrinsic process involving deep reasoning and justification for decisions or events –a process which takes account of the broader historical, social, and/or political contexts within these decisions were taken (Hatton & Smith, 1995).

Hereupon, the levels of reflection established by Mezirow (1981) are as follows: 1) Descriptive reflection: description of a situation without analysis, 2) Discriminative reflection: reflection on the effectiveness, causes and context of a practice, 3) Affective reflection: reflection on a feeling, emotions in relation to a practice, 4) Reflection involving value judgment: reflection on positive and negative values, 5) Conceptual reflection: awareness and understanding of practice, 6) Theoretical reflection: reflection on recognized rules, on the recognized role, social expectations, and 7) Psychic reflection: reflection on precipitous judgment, one's interests and anticipations.

Another one categorization outlined by Thorpe (2004) in order to better understand the quality of the reflections, include Descriptive, Interpretive and Critical levels.

- At the Descriptive level, there is a lack of deliberate appraisal of teacher.
- At the Interpretive level, teachers demonstrate insight through analysis, discrimination, and evaluation.
- Finally, at the Critical level, teachers indicate a transformation from initial perspective.

Following Van Manen (1977) and Hatton and Smith (1995), Larrivee's scale (2008) "Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner" locates a teacher's level of reflection on a continuum of four categories of reflection: pre-reflection, surface reflection, pedagogical reflection, and critical reflection. The first level, pre-reflection, was incorporated to represent the absence of reflection (Murphy & Ermeling, 2016). At the pre-reflective or non-reflective level, teachers react to students, in-classroom situations and teaching/learning incidents automatically and spontaneously, without conscious consideration of alternative responses and thoughtful association to other contexts. The other three levels that measure the presence and depth of reflection according to Larrivee (2008) can be briefly described as: a) Surface reflection: an initial level focusing on teaching functions, methods, actions, or skills. Teachers practicing surface reflection examine the effectiveness of strategies used by them to achieve predetermined objectives without, however, examining the real value of those goals. b) Pedagogical reflection: a more advanced level of reflection based on application of teaching knowledge, theory, and/or research. Teachers engaging in pedagogical reflection strive to understand the theoretical basis for classroom practice and their pedagogical decisions and to foster consistency between their theoretical beliefs and practical actions within the classroom. c) Critical reflection: a higher-order level examining the ethical, social, and political implications and consequences of teaching for students. Teachers who are critically reflective focus their attention both on their own practice and on the surrounding social environment in which these practices are situated.

Furthermore, Lee (2005) proposed three different levels regarding depth of reflection: a) Recall level: when teachers describe their experiences and interpret the situations based on the recall of experiences without looking for relevant meaningful explanations. b) Rationalisation level: when teachers seek causal relationships between their experiences, interpret the resulting situations with logical causes and generalize their experiences or find new guiding principles for their future actions. Reflection at this level mainly concerns the Curriculum, the selection of appropriate materials, tools, and teaching aids. c) Reflective level: when teachers, firstly, approach their experiences with the intention of changing, altering or improving their teaching processes and techniques in the future, secondly, analyze their experiences through many perspectives and, thirdly, are able to see the positive and constructive impact of the interactive cooperation of teachers on the values, attitudes, and cognitive and socio-affective achievements of their students.

Three domains of teacher reflection (Pragmatic, Ethical and Moral domains of reflection) are distinguished by Luttenberg & Bergen (2008). According to them, the Pragmatic reflection refers to the reflection upon a situation that occurs in terms of teaching objectives and means. A means is considered suitable when it is judged to be effective and efficient, and this is determined on the basis of empirical knowledge derived from personal experience or scientific knowledge. The objective of ethical reflection is to establish a guideline for a manner of living which is good and realizable within the possibilities which one has. Moral reflection involves the subordination of personal-private interests to general interests and well-being of all those involved.

Another teacher reflection scale, “English Language Teaching Reflection Inventory (ELTRI)” was developed by Akbari et al. (2010). The scale includes five components: Practical, Cognitive, Affective, Meta-cognitive, and Critical reflection.

- Practical reflection refers to the actual practice of reflection through journal writing, lesson reports, audio and video recordings, and group discussions.
- Cognitive reflection is concerned with teachers’ activities for their professional growth through attending conferences or doing action research.
- Affective reflection concerns teachers’ attachment to and reflection on their students’ academic progress, and emotional well-being.
- The metacognitive component of reflection deals with teachers’ reflection on their own personality and beliefs, emotional make-up, and identity.
- Critical reflection, which is the last component measured by the inventory, concerns teachers’ attention to the socio-political aspects of their teaching practice.

Finally, Lysberg & Rønning (2021) identified three primary level of reflections: 1) Comment and describe: it refers to the teachers’ comments and descriptions, 2) Extend and exemplify: it refers to how teachers extend and exemplify their descriptions through broadening their comments drawing on examples from their own teaching experience, and 3) Critical exploration: it refers to an enhanced analytic stance when teachers question and explore proposals for change, linking them to existing practice.

### **Aim of research**

The aim of this systematic review is to understand the level of teachers’ reflection that has already been examined, recorded and reported by researchers, constituting thus a fundamental basis on which further investigation and examination should take place. A systematic approach utilizing thematic synthesis (Thomas & Harden, 2008) will be used to approach the following question: To what extent and depth has the existing literature examined the different levels of reflection that teachers experience and achieve?

### **METHOD**

Trusted academic electronic databases, (Eric, Taylor & Francis and Scopus), that have relevant to the topic authoritative researches, were searched on January 2025 using the following search terms that were restricted to the title of publications: reflect\* AND level\*, reflect\* AND teachers\*. No restrictions were used for the date of publication.

The reference lists of retrieved articles were searched to identify additional publications that were relevant to the research question. During the initial search, 1,820 article records were identified. Titles were screened initially to ensure the relevance of the article to the current review. If the article was identified as relevant, the abstract was screened before either rejecting or downloading the full text of the article. Following the removal of duplicate records and ascertaining the relevance of the article to the current research question, a total of 90 article abstracts and methodologies were screened in relation to the inclusion and exclusion criteria. Studies that did not satisfy all inclusion criteria were excluded from the analysis. This resulted in thirteen (13) full-text articles being included in a final synthesis (see Figure 1). The present study adopted Moher, Liberati, Tetzlaff, Altman & the PRISMA Group (2010) idea of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) a guide to complete this study (Kernagaran & Abdullah, 2022) and each step is represented in Figure 1.

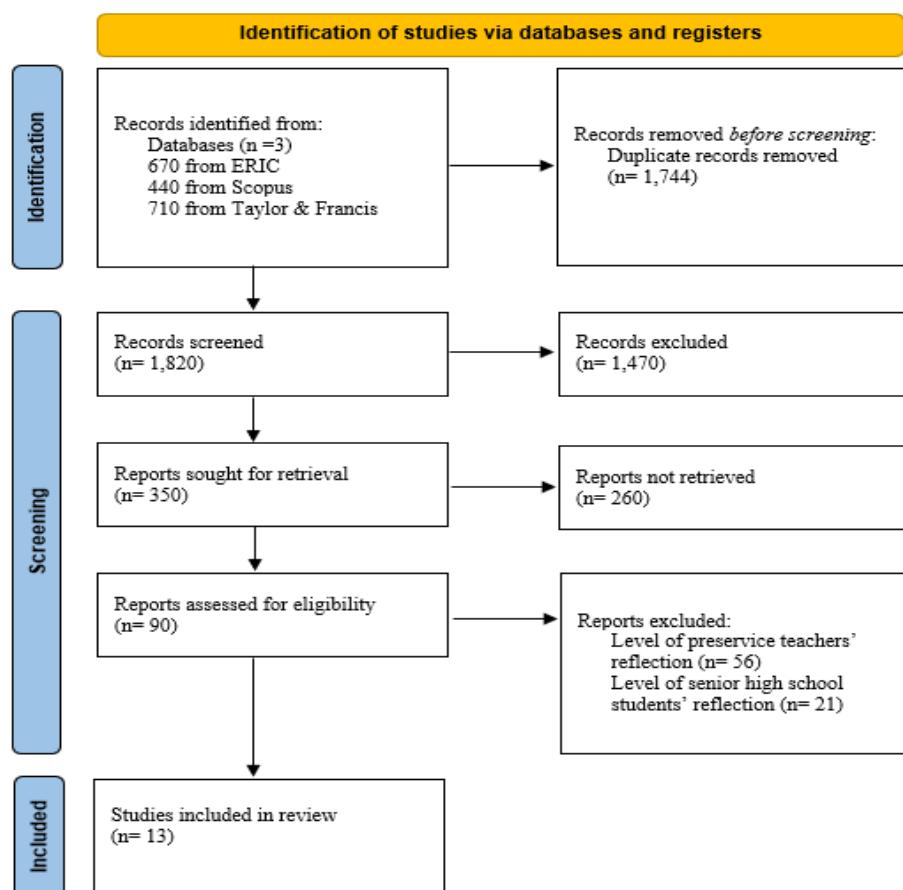


Figure 1  
PRISMA flowchart describing the stages of the systematic literature search

### **Inclusion and exclusion criteria**

A study was included in the review if it: (1) was an article investigating the level of reflection that was identified as the primary topic or area of interest; (2) described and evaluated the level of in-service teachers; (3) was a qualitative, quantitative or mixed method study. On the other hand, a study was excluded if: (1) the level of reflection was not the primary or, at least, a substantial topic or area of focus (e.g., reflection may have been reported in the results without being identified as a study variable in the methods of the study); (2) it constituted an exclusively theoretical typology of level of reflection not based on any empirical data; (3) it assessed the level of senior high school students' reflection and not the teachers' reflection; (4) it measured the level of candidate (not in-service) teachers' reflection. The inclusion and exclusion criteria are presented in Table 1. Titles/abstracts and full-texts were independently reviewed by two authors (RV, KK).

**Table 1**  
**Inclusion and exclusion criteria for selected studies**

Inclusion criteria	Exclusion criteria
• Level of reflection is identified as the primary topic or area of focus within the methods of the study.	• Level of reflection is not the primary topic or area of focus (e.g., reflection may have been reported in the results without being identified as a study variable in the methods of the study)
• Level of in-service teachers' reflection	• Theoretical typology of level of reflection
• Qualitative, quantitative or mixed method design	• Level of senior high school students' reflection
	• Level of candidate teachers' reflection

### **Procedure**

The reviewing process was divided into three steps: title screening, abstract screening, and full-text screening. First, databases' outputs were downloaded and processed. Duplications were removed and the title and abstracts of the remaining articles ( $n = 1820$ ) were screened. From these, a total of 350 were identified for further review. Then the screened-in records on the basis of their full text and identified empirical studies to be retained in the final qualitative review were assessed using the inclusion and exclusion criteria defined above. Full-text of the remaining articles was screened, leading to a total of thirteen (13) articles. Thus, thirteen (13) articles were included in the systematic review and the final set of papers was qualitatively coded in several iterative rounds in relation to the level of reflection.

### **Data extraction**

Relevant data from the thirteen (13) selected articles were identified and compiled in Table 2. The following data were extracted: (1) first author's name, (2) year of publication, (3) design of the study, (4) location, (5) population, (6) sample size, (7) (name of the) researcher who proposed the reflection level's categorization.

### **Assessment for Bias**

Given that there are no empirically tested methods for justifying the exclusion of qualitative work from data syntheses (Thomas & Harden, 2008), the current study did

not perform an assessment for bias of studies included in the analysis. However, descriptive levels of reflection were tabulated and reported providing transparency regarding the relative contribution of each article to the final product. Furthermore, trustworthiness was ensured through the consideration of the following criteria: credibility, transferability, dependability and confirmability (Nowell et al., 2017). Credibility was ensured through the prolonged engagement with data using structured methods of analysis (Thomas & Harden, 2008), transferability and dependability were operationalized through transparent descriptive level of reflection providing an analytical description of the data (Nowell et al., 2017). Finally, confirmability was achieved through the achievement of the previous three trustworthiness criteria and the researchers' self-commitment to reduce personal bias during systematic review (Nowell et al., 2017).

**Table 2**  
**Characteristics and data of included studies**

Authors	Year of publication	Study design	Study location	Study population	Sample size	Researcher who proposed the reflection level's categorization
1. Chi	2010	Qualitative study	China	Elementary teachers	12	Thorpe, 2004
2. Hilal et al.	2022	Cross-sectional quantitative study	Asia Oman	Elementary teachers and secondary teachers	1095	Akbari et al., 2010
3. Lefebvre et al.	2022	Qualitative, interpretive and exploratory study	USA	Elementary teachers	6	Mezirow, 1981
4. Lysberg & Ronning	2021	Qualitative study	Norway	Elementary teachers	17	Lysberg & Ronning, 2021
5. Luttenberg & Bergen	2008	Qualitative study	Netherlands	Secondary teachers	11	Luttenberg & Bergen, 2008
6. Murphy & Ermeling	2016	Mixed methods research	USA	Elementary teachers	171	Larrivee, 2008
7. Pultorak & Barnes	2009	Qualitative study	USA	Elementary teachers	98	Van Manen, 1977
8. Saylor	2014	Qualitative research	USA	Early childhood teachers	6	Larrivee, 2008
9. Saylor et al.	2018	Qualitative research	USA	Early childhood and Elementary teachers	5	Larrivee, 2008
10. Shabeeb & Akkary	2014	Qualitative case-study design	Lebanon	Elementary teachers	11	van Manen, 1977
11. Voulgari & Koutrouba	2021	Qualitative research	Greece	Elementary teachers	20	Lee, 2005
12. Winchester & Winchester	2011	Qualitative research method	UK	Faculty members of university college	6	Larrivee, 2008
13. Zhao	2012	Qualitative research	China	Elementary teachers	4	Van Manen, 1977

## FINDINGS

Out of ninety (90) articles assessed for eligibility (see Fig. 1), thirteen (13) studies were included in the final systematic review. The main characteristics of all eligible studies are presented in Table 2. The majority of the studies were conducted in the USA (5 studies), while the others in Europe (4 studies; Greece, Netherlands, Norway, UK) and in Asia (2 studies; China and 2 studies; Lebanon, Oman). The publication year ranged from 2008 to 2022.

The studies included in-service early childhood teachers (1 study), elementary teachers (8 studies), early childhood and elementary teachers (1 study), secondary teachers (1 study), elementary and secondary teachers (1 study) and faculty members of university college (1 study). The sample sizes ranged from 4 to 1095 participants. Their age range was from 24 to >60 years. On average, the majority of samples was female (72%) while two studies included only women (Saylor, 2014; Shabeb & Akkary, 2014).

In total, eleven (11) studies were qualitative, interpretive and exploratory studies, one (1) quantitative study and one (1) mixed methods research. The study of Hilal et al. (2022) employed a cross-sectional survey design under quantitative methods while the study of Murphy & Ermeling (2016) collected quantitative and qualitative data.

As regards the level/ categories of reflection, the four (4) studies of Murphy & Ermeling (2016), Saylor (2014), Saylor et al. (2018), and Winchester & Winchester (2011) selected Larrivee's scale (2008) "Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner". The studies of Pultorak & Barnes (2009), Shabeb & Akkary (2014) and Zhao (2012) adapted Van Manen's (1977) depiction of the levels of reflection. Chi (2010) selected the categorization outlined by Thorpe (2004). The quantitative study of Hilal et al. (2022) used the teacher reflection scale of Akbari et al. (2010). The study of Lefebvre et al. (2022) used Mezirow's (1981) reflective model. Lysberg & Rønning (2021) selected three primary types of reflection, while Luttenberg & Bergen (2008) examined the pragmatic, ethical and moral domains of reflection. Lee's (2005) categorisation was selected in the research of Voulgari & Koutrouba (2021).

Regarding the selected studies, teachers are at various levels of reflective practice Saylor (2014). More specifically, the participants cared most about their teaching methods, instructional strategies in their lessons and classroom management (Chi, 2010). They particularly focused their reflection on aspects concerning the description of a situation, discernment of their actions and the feelings that emerged. They are not yet sufficiently capable of distancing themselves from their daily classroom life, which may explain the lack of professional development in reflection (Hilal et al., 2022; Lefebvre et al., 2022).

The level of teachers' reflection was not sufficiently high to enable the adoption of a more open approach of moral or critical level of reflection in many of the cases presented by the teachers (Luttenberg & Bergen, 2008; Murphy & Ermeling, 2016; Voulgari & Koutrouba, 2021; Winchester & Winchester, 2011).

Teachers should be encouraged to move beyond technical reflections and embrace critical reflection for deeper professional growth (Pultorak & Barnes, 2009; Saylor et al., 2018; Shabeeb & Akkary, 2014). Furthermore, this shift can help create a more open and reflective teaching environment — one that supports both their own development and that of their students, while also enhancing learner autonomy and empathy (Thuy & Thao, 2025; Zhao, 2012). To build on this, teachers should undertake such reflection not only to revisit the past or to become aware of the inquiry processes they were experiencing, but also to guide their future actions (Pultorak & Barnes, 2009).

## **DISCUSSION**

The purpose of this systematic review was to understand the level of teachers' reflection that has already been examined, recorded and reported by researchers. Although the subject of educational reflection has been approached in a theoretical framework and various classifications have emerged in the international literature, the examination of teachers' level of reflection is still quite poorly examined. Relevant educational research is not as yet in-depth or extensive, given the fact that only 1 research has been conducted in Greece and 4 in Europe that provide useful results about the level of teachers' reflection.

As indicated by the year of publication (2008-2022) of the studies included in the present systematic review, contemporary educational research tends to display a growing interest about the level of teacher reflection. This probably explains why innovative studies are conducted with the aim of highlighting scientific results that provide an insight into the level of teachers' reflection and offer data important for further similar studies.

Regarding the sample, there is no good variation in the gender variable, as women make up 72% of the sample of the included studies. This is explained by the fact that gender is a factor of differentiation in the teaching profession, with women being the majority in the educational sector, especially in primary education (Voulgari & Koutrouba, 2021), a phenomenon which is not only Greek, but is observed in almost all European countries (Vasilou-Papageorgiou, 1994).

Furthermore, in accordance with Figure 1., a bigger number of studies (56) concerning the level of pre-service teachers' reflection have been conducted in comparison to the number of studies concerning in-service teachers' reflection (13), a finding which is consistent with prior research of Saylor (2014). It is obvious that more extensive future research on in-service teachers' reflection practices would provide the scientific educational community with very constructive and more accurate findings which could strengthen teachers' willingness to implement reflection more consciously in order to develop greater understanding of their own professional practice.

In addition, the majority of studies (11) included in the present review were qualitative, interpretive and exploratory studies (except for 2), one (1) was quantitative and one (1) was mixed methods research. Apparently, the level of reflection has been approached almost through the one-dimensional research approach, qualitative methodology, which partially succeeded in interpreting the issue of research, a finding which is coherent

with the international literature (Calandra et al., 2009; Min et al., 2020; Nurfaidah et al., 2017; Ulusoy, 2016).

### **METHODOLOGICAL CONSIDERATIONS**

Further future research with quantitative or mixed research methodology design, which would combine elements of quantitative and, also, qualitative research to examine the levels of teachers' reflection, would bridge the knowledge gap that so far prevents a deep understanding of the multifaceted phenomenon under study.

Regarding the levels/categories of reflection, four (4) studies selected Larrivee's scale (2008) "Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner" that was used to measure and guide teachers' reflective practices. The rest of the studies used different classifications of teachers' level reflection. This is probably due to the absence in international literature of reliable and valid tools that identify and evaluate the teacher's reflective practices. The most recognized Larrivee's (2008) relevant assessment tool is divided into four categories: (a) pre – reflection; (b) surface reflection; (c) pedagogical reflection and (d) critical reflection. This tool could become the basis for a collaborative dialogue for assisting and promoting the development of scaffolded strategies to facilitate meaningful and high-level reflective practices among teachers (Larrivee, 2008). It is possible that the abovementioned studies selected Larrivee's (2008) "Survey of Reflective Practice" because it seems to be, so far, the only one specific, well-researched and modern handy instrument for measuring a teacher's level of reflective practice (Saylor, 2014; Voulgari & Koutrouba, 2023), that enables teachers to directly score their own reflective practice in order to develop strategies that might facilitate a steady moving-forward step toward higher-order reflection (Murphy & Ermeling, 2016), to enhance existing skills of reflection and further increase understanding of their professional practice.

Finally, as regards the level of reflection that teachers achieved according to the abovementioned surveys, the majority of teachers exhibited reflective abilities only to a limited degree and to significantly lower levels. More specifically, the participating teachers focused more on their teaching methods and classroom management and developed a slightly better understanding of the reflective process mainly or exclusively in the descriptive level of reflection. They reflected on aspects concerning the description of a situation, discernment of their actions, and the feelings that emerged, but not on the moral and ethical implications of their own classroom practices. Only few teachers were reported to have reflected on issues regarding equality, social justice, or broader moral values within the school setting with the intention of changing their personal stance and behavior and improving their professional skills and techniques in the future. This finding is also coherent with the existing international literature (Cavanagh & Prescott, 2010; Kaldi & Pyrgiotakis, 2009; Ulusoy, 2016; Voulgari & Koutrouba, 2022).

### **IMPLICATIONS**

Structured reflection activities could enable teachers to identify appropriate, specific areas of practice improvement, thus giving reflective practice a central value at both the

individual professional level and the school level. In such a case educational policy makers will have, on the one hand, to provide teachers with a wide range of scientific, pedagogical, and administrative tools which make them be and feel professionally self-confident and well-supported and, on the other hand, to convince a faltering society that well-planned integrated changes in education can highly contribute regenerating hope (Koutrouba et al., 2018).

## **CONCLUSION**

In the present review, the findings of thirteen (13) studies on reflective practice in education have been synthesized. Reflective practice is presented as a re-constructive and re-productive process whereby participants intentionally examine their own beliefs with regard to teaching, being thus able to gain more extensive and more substantial benefit from their classroom experience. Reflection, therefore, seems to be a self-directed process that enables teachers to better understand the underlying assumptions of their teaching and to move toward the higher-ranked stages of the reflective practice in order to set more meaningful, realistic, flexible and adaptable goals for improving their future teaching practices.

The recommendations are provided based on the gaps identified in past studies. Based on the systematic literature review findings, the level of reflection has been approached almost through the one-dimensional research approach, qualitative methodology. We suggest for future researchers to engage in mixed methods research approaches to provide insight into the level of teachers' reflection and offer data important for further similar studies through reliable and valid tools that identify and evaluate the teachers' reflective practices. In addition, future researchers are expected to use larger sample sizes with good variation in the gender variable to reduce sampling error and report better results. Furthermore, more extensive future research on in-service teachers' reflection practices should be carried out. This study recommends that more research should be carried out by introducing new variables such as psychological factors (teachers' job satisfaction), and social norms to endorse that reflection improves teachers' performance. Finally, the fact that teachers exhibited reflective abilities to lower levels highlights the need to establish pre-service and in-service programmes that lay the foundation for structured professional reflection in meaningful ways on their teaching performance. By fostering structured reflection at all levels of education, teachers can refine their practice, enhance student learning, and contribute to a more effective education system.

## **REFERENCES**

Akbari, R., Behzadpoor, F., & Dadvand, B. (2010). Development of English language teaching reflection inventory. *System* 38(2), 211–227. <https://doi.org/10.1016/j.system.2010.03.003>

Bozkurt, E., & Yetkin-Özdemir, İ. E. (2018). Middle School Mathematics Teachers' Reflection Activities in the Context of Lesson Study. *International Journal of Instruction*, 11(1), 379–394. <https://doi.org/10.12973/iji.2018.11126a>

Calandra, B., Brantley-Dias, L., Lee, J. K., & Fox, D. L. (2009). Using Video Editing to Cultivate Novice Teachers' Practice. *JRTE*, 42(1), 73–94. Retrieved from <https://files.eric.ed.gov/fulltext/EJ856934.pdf>

Campoy, R. (2010). Reflective Thinking and Educational Solutions: Clarifying What Teacher Educators Are Attempting to Accomplish. *SRATE Journal*, 19(2), 15–22. Retrieved from <https://files.eric.ed.gov/fulltext/EJ948694.pdf>

Cavanagh, M., & Prescott, A. (2010). The Growth of Reflective Practice among Three Beginning Secondary Mathematics Teachers. *Asia-Pacific Journal of Teacher Education*, 38(2), 147–159. <https://doi.org/10.1080/13598661003678968>

Denton, D. W., & Ellis, A. K. (2020). The Effects of Reflection on Seventh Grade Social Studies Student Learning and Perception, *Educational Studies*, 49(1), 184–199. <https://doi.org/10.1080/03055698.2020.1835616>

Farrell, T. S. C. (2008). Critical Incidents in ELT Initial Teacher Training. *ELT Journal*, 62(1), 3–10. <https://doi.org/10.1093/elt/ccm072>

Farrell, T. S. C. (2013). Critical Incident Analysis through Narrative Reflective Practice: A Case Study. *Iranian Journal of Language Teaching Research*, 1(1), 79–89. Retrieved from [https://ijltr.urmia.ac.ir/article\\_20454\\_67afba09fa1703ecd6c515588541ecca.pdf](https://ijltr.urmia.ac.ir/article_20454_67afba09fa1703ecd6c515588541ecca.pdf)

Halquist, D., & Musanti, S. (2010). Critical Incidents and Reflection: Turning Points that Challenge the Researcher and Create Opportunities for Knowing. *International Journal of Qualitative Studies in Education*, 23(4), 449–461. <https://doi.org/10.1080/09518398.2010.492811>

Hatton, N., & Smith, D. (1995). Reflection in Teacher Education: Towards Definition and Implementation. *Teaching and Teacher Education*, 11(1), 33–49. [https://doi.org/10.1016/0742-051X\(94\)00012-U](https://doi.org/10.1016/0742-051X(94)00012-U)

Hilal, Y., Hammad, W., & Polatcan, M. (2022). Does distributed leadership improve teacher agency? Exploring the mediating effect of teacher reflection. *Educational Management Administration & Leadership*, 52(6), 1369–1387. <https://doi.org/10.1177/17411432221134931>

Kaldi, S., & Pyrgiotakis, G. (2009). Student Teachers' Reflections of Teaching during School Teaching Practice. *The International Journal of Learning*, 16(9), 185–196. <https://doi.org/10.18848/1447-9494/CGP/v16i09/46599>

Kernagaran, V., & Abdullah, A. (2022). A Systematic Literature Review of Flipped Learning in English as Second Language (ESL) Context. *International Journal of Instruction*, 15(2), 793–814. <https://doi.org/10.29333/iji.2022.15243a>

Koutrouba, K., Markarian, D.A., & Sardianou, E. (2018). Classroom Management Style: Greek Teachers' Perceptions. *International Journal of Instruction*, 11(4), 641–656. <https://doi.org/10.12973/iji.2018.11440a>

Koutrouba, K., Voulgari, R., & Antonopoulou, E. (2020). Educational Reflection: Metacognitive Feedback in Teaching. *Educational Sciences*, 1 (1), 112–128. <https://doi.org/10.26248/v2020i1.772>

Larrivee, B. (2008). Development of a Tool to Assess Teachers' Level of Reflective Practice. *Reflective Practice*, 9(3), 341–360. <https://doi.org/10.1080/14623940802207451>

Lee, H. J. (2005). Understanding and Assessing Preservice Teachers' Reflective Thinking. *Teaching and Teacher Education*, 21(6), 699–715. <https://doi.org/10.1016/j.tate.2005.05.007>

Lefebvre, J., Lefebvre, H., & Lefebvre, B. (2022). Reflection of novice teachers on their teaching practice. *Reflective Practice*, 23(4), 452–466. <https://doi.org/10.1080/14623943.2022.2056883>

Lengeling, M. M., & Mora Pablo, I. (2016). Reflections on Critical Incidents of EFL Teachers during Career Entry in Central Mexico. *HOW Journal*, 23(2), 75–88. <https://doi.org/10.19183/how.23.2.158>

Liakopoulou, M. (2012). The Role of Field Experience in the Preparation of Reflective Teachers. *Australian Journal of Teacher Education* 37(6), 42–54. <https://doi.org/10.14221/ajte.2012v37n6.4>

Lysberg, J., & Rønning, W. (2021). Teachers' reflections on proposals for change in situated teamwork. *Reflective Practice*, 22(4), 459–473. <https://doi.org/10.1080/14623943.2021.1915267>

Luttenberg, J., & Bergen, T. (2008). Teacher reflection: the development of a typology. *Teachers and teaching: theory and practice*, 14(5-6), 543–566. <https://doi.org/10.1080/13540600802583713>

Mezirow, J. (1981). A critical theory of adult learning and education. *Adult Education Quarterly*, 32(1), 3–24. <https://doi.org/10.1177/074171368103200101>

Min, M., Akerson, V., & Aydeniz, F. (2020). Exploring Preservice Teachers' Beliefs about Effective Science Teaching through Their Collaborative Oral Reflections. *Journal of Science Teacher Education*, 31(3), 245–263. <https://doi.org/10.1080/1046560x.2019.1690818>

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & the PRISMA Group (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of internal medicine*, 151(4), 264–270. <https://doi.org/10.1136/bmj.b2535>

Murphy, D. L., & Ermeling, B. A. (2016). Feedback on reflection: comparing rating-scale and forced-choice formats for measuring and facilitating teacher team reflective practice. *Reflective Practice*, 17(3), 317–333. <https://doi.org/10.1080/14623943.2016.1164681>

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1–13. <https://doi.org/10.1177/1609406917733847>

Nurfaidah, S., Lengkanawati, N.S., & Sukyadi, D. (2017). Levels of reflection in EFL pre-service teachers' teaching journal. *Indonesian Journal of Applied Linguistics*, 7(1), 80–92. <https://doi.org/10.17509/ijal.v7i1.6861>

Pultorak, E. G., & Barnes, D. (2009). Reflectivity and Teaching Performance of Novice Teachers: Three Years of Investigation. *Action in Teacher Education*, 31(2), 33–46. <https://doi.org/10.1080/01626620.2009.10463516>

Rodgers, C. (2002). Defining Reflection: Another Look at John Dewey and Reflective Thinking. *Teachers College Record*, 104, 842–866.

Saylor, L. (2014). *The Relationship between Teacher Quality and Reflective Practice* [Doctoral dissertation]. United States: University of Cincinnati. [http://rave.ohiolink.edu/etdc/view?acc\\_num=ucin1397235807](http://rave.ohiolink.edu/etdc/view?acc_num=ucin1397235807)

Saylor, L., McKenzie, G. K., & Sacco, C. C. (2018). Teacher-Centered Mentorship as Meaningful Professional Montessori Development. *Journal of Montessori Research*, 4(2), 10–32. <https://doi.org/10.17161/jomr.v4i2.6923>

Schön, D. A. (1987). *Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions*. San Francisco: Jossey-Bass.

Shabeeb, L., & Akkary, R. (2014). Developing teachers' reflective practice: an explorative study of teachers' professional learning experience in a private Lebanese school. *Professional Development in Education*, 40(3), 376–397. <https://doi.org/10.1080/19415257.2013.775662>

Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8(1), 45. <https://doi.org/10.1186/1471-2288-8-45>

Thorpe, K. (2004). Reflective learning journals: From concept to practice. *Reflective Practice*, 5(3), 327–343. <https://doi.org/10.1080/1462394042000270655>

Thuy, P. T., & Thao, L. T. (2025). Teachers' perspectives and strategies in enhancing learner autonomy and empathy in Vietnamese tertiary EFL education. *Anatolian Journal of Education*, 10(1), 179–192. <https://doi.org/10.29333/aje.2025.10113a>

Ulusoy, M. (2016). Field experiences in teacher education: the perceptions and qualities of written reflections. *Teaching in Higher Education*, 21(5), 532–544. <https://doi.org/10.1080/13562517.2016.1160215>

Van Manen, M. (1977). Linking Ways of Knowing with Ways of Being Practical. *Curriculum Inquiry* 6(3), 205–228. <https://doi.org/10.2307/1179579>

Vasilou-Papageorgiou, V. (1994). “Το γυναικείο φύλο στο διδασκαλικό επάγγελμα. Η ελληνική περίπτωση: διαπιστώσεις-συγκρίσεις-προοπτικές [The Female Gender in the

Teaching Profession. The Greek Case: Findings-comparisons-perspectives]". *Ta Eκπαιδευτικά*, 33: 52–62.

Voulgari, R., & Koutrouba. K. (2020). Attitudes and Perceptions of Primary Education Teachers on Educational Reflection. *International Journal of Educational Innovation* 2(4), 31–42. Retrieved from <https://journal.eepek.gr/keyword/753>

Voulgari, R., & Koutrouba K. (2021). Examining the depth of primary schoolteachers' reflection through the critical incident technique. *Educational Studies*, 1–19. <https://doi.org/10.1080/03055698.2021.1980863>

Voulgari, R., & Koutrouba K. (2022, March 7-9). Understanding the level of schoolteachers' reflection: A qualitative approach. *16th International Technology, Education and Development Conference (INTED2022)*, Valencia, Spain, (pp. 9032–9040). <https://doi.org/10.21125/inted.2022.2357>

Voulgari, R., & Koutrouba, K. (2023, November 13-15). Greek translation and cross-cultural adaptation of the questionnaire "Survey of reflective practice: A tool for assessing development as a reflective practitioner. *16th annual International Conference of Education, Research and Innovation (ICERI2023)*, Seville, Spain, (pp. 4632–4637). <https://doi.org/10.21125/iceri.2023.1151>

Voulgari, R., Koutrouba, K., Kaldi, S., & Tsoli, K. (2024). Educational Reflection and the Critical Incident. *Educational Sciences*, 1 (1), 25–44. <https://doi.org/10.26248/edusci.v2024i1.1776>

Winchester, T., & Winchester, M. (2011). Exploring the impact of faculty reflection on weekly student evaluations of teaching. *International Journal for Academic Development*, 16(2), 119-131. <https://doi.org/10.1080/1360144X.2011.568679>

Zeichner, K., & Liston, D. (1987). Teaching student teachers to reflect. *Harvard Educational Review*, 57(1), 23–49. <https://doi.org/10.17763/haer.57.1.j18v7162275t1w3w>

Zhao, M. (2012). Teachers' Professional Development from the Perspective of Teaching Reflection Levels. *Chinese Education & Society*, 45(4), 56-67. <https://doi.org/10.2753/ced1061-1932450404>