Designing and Validating a Model for Empowering Primary Teachers based on Lesson Study Approach Using Experts' Opinion

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Abstract

Purpose: The aim of the present study was to design and validate a model for empowering primary teachers based on the study lesson approach using experts' opinion.

Methodology: This was an applied qualitative study based on the aim and the nature of the data, respectively. The study population in the qualitative part of the research included education experts and top teachers in education areas. The sample size in the qualitative part was selected using the theoretical saturation principle and purposive sampling method. Data collection was carried out using interview. The validity and reliability of the instruments were evaluated and confirmed. In the qualitative part, data analysis was performed using theoretical coding in MAXQDA software and grounded theory method.

Findings: The results of factor analysis showed that out of 120 available indicators (items), 18 main components were identified. Accordingly, the components of knowledge, skills, attitudes as constituent factors and individual factors, organizational factors and group factors were identified as effective factors.

Conclusion: The results also showed a significant difference between the scores of teachers who participated and not participate in the lesson study process in terms of the standards of educational design and planning, creating and maintaining a learning atmosphere, implementing and conducting teaching, measuring and communicating with learning outcomes, evaluation and reflection on learning and teaching, more cooperation from teachers, activities to strengthen content knowledge and educational technology. Therefore, it can be stated that lesson study approach can lead to the development of teachers' abilities.

Keywords: Empowerment, Primary Teachers, Study Lesson Approach

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1. Introduction

Previous studies have demonstrated that the individual disability and inefficiency have destructive effects on the process of development and prosperity, so that motivation, commitment, effort of human resources and capability overshadow organizational prosperity. Incompetence and inefficiency weaken the spirit of work and effort. Therefore, empowerment of individuals in an organization is the key to survival and sustainability of the development and of that organization and its members (Jenkins, 2020). Empowerment is a process that evokes a sense of inner strength based on specialized knowledge along with high motivation among employees. Empowerment, in fact, is a method used to increase teachers' productivity by increasing their commitment to the organization, as well as improving client relationships and changing the way power is exercised. This valuable method establishes a balance between complete control and close supervision of managers and completes freedom of individuals (Chen, et al, 2019).

Empowerment is the process by which the principal helps teachers acquire the ability to make independent decisions. This process affects not only the performance of individuals but also their personality. Individual empowerment includes increasing self-confidence and the ability to set realistic goals and realize potential capabilities. Every person has strengths and weaknesses as well as a wide range of skills used under different situations every day, but many people are often unaware or do not value their true abilities. A person who strives for empowerment is able to take control of his/her life by making positive decisions and setting goals. Developing self-awareness, which means understanding our strengths and weaknesses and having sufficient knowledge of our individual limitations, is key to individual empowerment. However, the most important empowerment concept is delegating authority to the lowest levels of the organization. The decision-making process must have a high degree of decentralization, and individuals or workgroups must be responsible for a whole part of the work process (Lee, Hudson, 2017). Rapid environmental change forces organizations to resort to various management mechanisms to adapt to the environment, and empowerment is one of these mechanisms and plays a key role in the life of new organizations. Empowerment aims to use people's brains as their arms. Therefore, empowerment refers to an inner sense in individuals that allows them to make their own decisions independently in their work process (Petrić, et al, 2017).

Teacher empowerment is one of the most important issues in global educational systems that are directly and closely related to the learning process. Certainly, the more capable teachers are in their profession, the more successful they will be in their teaching and teaching, and the more they will enable learners to learn. Professional development of teachers is "processes and activities designed to enhance the knowledge, skills and professional attitudes of teachers so that they can improve student learning. In other words, the success of any educational system, to a decisive extent, depends on teacher's level of empowerment and knowledge. According to the Japanese, the competence of any system is equal to the competence of its teachers, therefore, it can be stated that the teacher, the most important member of the educational system in the teaching-learning process, is the main architect of the educational system (Mir-Mohammadi, et al, 2017).

Since the present study aims to investigate empowerment among primary school teachers, therefore, it has been referred to as an important factor in the research of these teachers that can have positive outcomes for their empowerment. Lesson study is a factor that helps primary teachers in teaching methods and makes teaching easier for them. "Lesson study" is also a primary form of professional development of teachers in Japan (Mohammadi, et al, 2019). Lesson study aims to continuously improve teaching so as to ensure effective and better learning and its primary focus is on how students think and learn (Yakar, Turgut, 2017).

"Lesson study" is different from other forms of professional development, because professional development takes place during teaching and learning. Its focus, as Stigler and Hibbert (1994) point out in The Learning Gap, is teaching, not teachers, working students, not student work. The criterion for the success of "lesson study" is teachers' teaching, not the production of a lesson. Preparation of better lessons is a by-product of the process, but not its primary goal (Fernandez, Yoshida, 2012). Lesson study is also considered as one of the most effective methods of teacher professional development that has been proposed
and published within Japanese schools. Therefore, teachers find better methods to work with students by attending small groups and proposing basic topic regarding teaching. Lesson study is in fact the method of participatory research of classroom teachers, which has been mentioned as the most useful, practical and effective teacher professional development program in Japanese schools (Mir-Mohammadi, et al, 2017).

According to many researchers and scientists, teacher education is the most basic factor to create the desired conditions to achieve educational goals. It is the teacher who can even compensate for the defective textbooks and lack of educational facilities or, conversely, turn the best teaching situation into an inactive and unattractive environment by not being able to teach properly (Ardukhani, et al, 2015). Snodgrass et al. (2020) acknowledge that teachers are the most important factor "in quality education planning. Although other school inputs also affect educational outputs, not as much as teachers" Therefore, considering the prominent role of the teacher in the process of student development, any activity that helps increasing the ability in this group, can have a pervasive effect on the entire educational system. Empowerment program establishes a positive synergy between teachers and the school that will have positive outcomes for both groups. These outcomes can include positive job attitudes (such as job satisfaction and organizational commitment), mental health including positive emotions and reduced burnout, greater participation, better communication, better teaching performance within and beyond workplace, increased intrinsic motivation, and individual initiative, and pioneering behavior, acquisition of job and personal resources (Iranzadeh, et al, 2016).

Environmental changes and increasing global competitiveness have placed teacher empowerment in the focus of school principals and education officials. Because this organization, with its capable, committed, skilled and motivated teachers, will be better able to adapt to change and compete. Empowerment is the healthiest method to help teachers participate in the power process. This method creates a sense of trust, double energy, pride among teachers and their participation; responsibility and commitment are strengthened and ultimately will lead to professional development and growth of education (Jiang, et al, 2019).

One of the key and effective methods to empower teachers is to pay attention to the principles of research and development in the teaching process. For this reason, lesson study as a modern method is helpful in this regard. Lesson study is a research and development system in which teachers help to find ideas about school and education by carefully examining the actual teaching. Lesson study is essentially teacher-centered and in this approach, teachers ask their own difficult questions. Lesson study creates a professional learning community in which teachers add to their information about content, curriculum, teaching, and students, and the belief that a change in the way they teach can be effective in student learning (Skott, Møller, 2020). This approach changes the school culture as it brings teachers closer together to investigate and solve problems. While identifying and resolving issues and problems as a group, teachers also achieve a common language. Teachers provide their own individual interpretation of the instruction language and cooperate with each other to understand how new ideas should be implemented (Lee, Tan, 2020).

Keshtvarz & Anari Nejad (2019) conducted a study titled "The effect of lesson study education on teacher empowerment". Their study population included high school teachers. The results showed a significant difference between the empowerment scores of teachers who participated in the lesson study process and teachers who did not participate in this process. The results also showed a significant difference between the scores of teachers who participated and those who did not participate in the lesson study process in terms of the standards of educational design and planning, creating and maintaining a learning atmosphere, implementing and conducting teaching, measuring and communicating with learning outcomes, evaluation and reflection on learning and teaching, more teachers' cooperation, activities to strengthen content knowledge and educational technology. Therefore, it can be stated that lesson study can lead to the development of teachers' abilities. Pejman, et al (2017) conducted a study titled "The effectiveness of the lesson study on the professional skills of teachers working in Special Education of Hamadan province." Their
study population included teachers working in Special Education of Hamadan province. This was an ex post facta study and the results showed a significant difference between the lesson study group and normal groups in terms of providing learning opportunities, knowledge of learning theories, use of educational tools and teaching aids, interest in increasing knowledge and job skills and encouraging students to team work. However, there was no significant difference between the two groups in terms of three components, i.e. using the correct evaluation methods, organization and management of the classroom, and the application of learning theories.

Nevertheless, education, despite its benefits to teachers, especially primary teachers, does not seem to pay much attention to this valuable approach. Instead, it has strengthened the barriers that have hindered the empowerment of teachers at this level. One of these shortcomings is the use of professors who have not understood the teacher's role and are considered as in-service training professors to hold training courses. Although these professors are prominent in their position, they don't belong to the education and teacher community and do not have a proper knowledge of their challenges. The second shortcoming is the lack of a comprehensive approach to the various knowledge and skills and social needs of the present age regarding the primary school curriculum, incomplete and inappropriate use of technology and teaching aids during in-service training, incomplete use of available resources of primary teachers, incomplete access to appropriate research tools, mismatch of course content and practical work required of teachers. Besides, considering the limited studies on the empowerment of primary school teachers, there is a challenge facing the education organization. These factors indicate the necessity of study on a comprehensive empowerment model for the primary school teachers and use of a valuable lesson study approach in this regard. Accordingly, the present study aims to identify the empowerment components of primary school teacher based on a lesson study approach, modify the future path and finally describe the key categories, so as to provide a model for primary school teacher empowerment and answer the important question what model can be offered to empower primary teachers based on the lesson study approach?

2. Methodology

Considering that the present study designs and validates the model of empowerment of primary school teachers based on the lesson study approach using experts' opinion, it is a retrospective study in terms of the time of occurrence of the phenomenon; decision-oriented in terms of results; applied in terms of aim; deductive and inductive in terms of study approach, cross-sectional in terms of the time of research, qualitative in terms of the data type, library in terms of the research environment, descriptive in terms of data collection method or the nature and method of research, and covert in terms of focus on the intended phenomenon.

The study population in the qualitative part of research includes education experts and top teachers in education areas. The inclusion criteria for these experts and top teachers include having at least a doctorate degree and to have an executive and educational job in the field of lesson study, research, etc. The sample size was estimated 20 people in the qualitative part using saturation principle and judgmental sampling method. The characteristics of the interviewees included seven deputy principals and principals of education, eight top primary teachers and five associate professors of Farhangian University. The data collection tool was interviews.

In order to ensure the validity of the instrument in the qualitative part of the research and in order to ensure the accuracy of the findings from the researcher's point of view, the valuable opinions of expert professors and university experts who were experts in this field were used. The opinion of participants was also used dueling the data analysis and interpretation phases at the same time. In the present study, the test-retest reliability and the inter-rater reliability methods were used to calculate the reliability of the interviews. The data analysis method was theoretical coding derived from the grounded theory method. Data analysis is the main focus of grounded theory method. In each study as a whole, data collection, adjustment, and analysis are interrelated. Three types of coding have been used to analyze the data obtained
from the interview as well as the theoretical foundations, which are open coding, axial coding and selective coding.

3. Findings

Participants to design and validate the research model, semi-structured interviews were performed with twenty relevant experts using six questions. A qualitative model has been designed using the grounded theory approach and MAXQDA software.

The following tables provide a checklist for the results of interview content analysis using open, axial, and selective coding. Data analysis began with the extraction of concepts and categories (open coding) and irrelevant and duplicate concepts and categories were removed. The results of open coding as well as interviewer code, frequency and source related to each category are presented in the following table.

| Table1. List of all concepts extracted from the semi-structured interview technique |
|---------------------------------|---------------------------------|-------------------------------|----------------------|
| **Construct**                   | **Selective coding**            | **Axial coding**              | **Open coding (index)** |
| Empowerment of primary school   |                                 |                               | I10, I6, I5, I1          |
| teachers based on the lesson     |                                 |                               | I1, I7                  |
| study approach                   |                                 |                               | I13, I14, I15           |
| Knowledge                        |                                 |                               | I12, I5, I14, I2, I11    |
| I know educational technologies  |                                 |                               | I3, I14, I11, I5        |
| and media.                       |                                 |                               | I3, I4, I11, I5         |
| I have good control over the     |                                 |                               | I12, I8, I3             |
| evaluation of the lesson content.|                                 |                               | I3, I4, I11, I5         |
| I think I am a good role model   |                                 |                               | I12, I5, I14, I2, I11    |
| for my students.                 |                                 |                               | I3, I4, I11, I5         |
| I encourage my students to       |                                 |                               | I12, I5, I14, I2, I11    |
| explore the intricacies of       |                                 |                               | I3, I4, I11, I5         |
| lesson content.                  |                                 |                               | I3, I4, I11, I5         |
| I have the necessary innovations |                                 |                               | I12, I5, I14, I2, I11    |
| in content delivery.             |                                 |                               | I3, I4, I11, I5         |
| My educational strategy is in    |                                 |                               | I12, I5, I14, I2, I11    |
| line with the philosophy of the  |                                 |                               | I3, I4, I11, I5         |
| lesson study.                    |                                 |                               | I3, I4, I11, I5         |
| I use content beyond textbooks.  |                                 |                               | I2, I6, I10, I14        |
| I change the book content        |                                 |                               | I11, I9, I10, I14, I5   |
| according to the circumstances.  |                                 |                               | I11, I9, I10, I14, I5   |
| I know the teaching methods well.|                                 |                               | I5, I11, I4, I13        |
| I use the active teaching method.|                                 |                               | I1, I2, I11, I7, I15    |
| Lesson study is an important part |                                 |                               | I8, I7, I11, I18        |
| of my teaching method.           |                                 |                               | I7, I3, I9, I12, I17    |
| I know problem-solving strategies |                                 |                               | I7, I3, I9, I12, I17    |
| in education.                    |                                 |                               | I7, I3, I9, I12, I17    |
| I am well aware of the curriculum.|                                 |                               | I1, I9, I13             |
| I consider the complete transfer |                                 |                               | I2, I6, I10, I14        |
| of course content to be an       |                                 |                               | I11, I9, I10, I14, I5   |
| important part of my job.        |                                 |                               | I11, I9, I10, I14, I5   |
| I believe in the effectiveness of |                                 |                               | I6, I11, I13            |
| teaching.                        |                                 |                               | I6, I11, I13            |
| Occasionally, I use different   |                                 |                               | I2, I6, I10, I14        |
| tools and situations to teach.   |                                 |                               | I2, I6, I10, I14        |
| **Skills** | **Comments** |
|----------------|----------------|
| I leave the choice of teaching methods to the students. | I3, I4, I11, I5 |
| I pay attention to cultural, social and economic characteristics during teaching. | I12, I8, I3 |
| I pay special attention to educational goals during teaching. | I3, I4, I11, I5 |
| I know a variety of evaluation methods. | I12, I5, I14, I2, I11 |
| I will suffice with the final evaluation. | I7, I3, I9, I12, I17 |
| I accept formative evaluation. | I11, I9, I13 |
| I consider descriptive evaluation as a compulsion in primary school. | I2, I6, I10, I14 |
| I emphasize student self-assessment. | I8, I7, I11, I18 |
| I use other assessment methods in the classroom. | I7, I3, I9, I12, I17 |
| I also consider evaluation as a kind of process research. | I1, I9, I13 |
| I consider evaluation to be just a step towards fixing the shortcomings and nothing else. | I2, I6, I10, I14 |
| I also use technology in evaluation. | I11, I9, I10, I14, I5 |
| I know the lesson study. | I6, I7, I5, I7 |
| I have a positive opinion about the lesson study process. | I10, I3, I18, I2 |
| I consider lesson study as a factor of learning progress. | I11, I5, I17 |
| I consider lesson study as a tool for presenting up-to-date course materials. | I11, I8, I4, I9 |
| I believe that lesson study is an important step in improving student performance. | I4, I2, I6 |
| I consider lesson study to be a factor in my social participation and that of students. | I4, I2, I8, I15, I9 |
| I think that lesson study is necessary to achieve educational goals. | I8, I2, I19, I11 |
| I use stories to teach lessons. | I6, I9, I3, I5 |
| I confront students with a new academic challenge in class every day. | I2, I11, I10, I7 |
| I use active teaching methods. | I10, I6, I5, I17 |
| I use lesson study as a continuous method for classroom discussion and observation. | I13, I14, I15 |
| I teach formally. | I12, I5, I14, I2, I11 |
| I teach informally. | I3, I4, I11, I5 |
| I use objective examples in teaching. | I6, I8, I10, I17, I4 |
| I get help from students in teaching. | I10, I8, I11, I3, I14 |
| At the beginning of each lesson, I first determine the objectives of the lesson study. | I11, I9, I13 |
| In the beginning, I do the lesson design. | I2, I10, I14 |
| Attitude                                                                 | I8, I7, I11, I18 | I7, I3, I19, I12, I17 | I1, I9, I13 | I2, I6, I10, I14 | I11, I9, I10, I14, I15 | I6, I7, I5, I7 | I8, I4, I19 | I16, I7, I5, I7 | I13, I14, I15 | I1, I13 | I2, I6, I10, I14 | I10, I6, I5, I17 | I8, I14, I11, I18 | I7, I3, I19, I12, I17 | I2, I6, I10, I14 | I11, I8, I4, I9 | I4, I2, I6 | I4, I15, I9 |
|------------------------------------------------------------------------|------------------|-------------------------|-------------|------------------|------------------------|----------------|-------------|------------------|------------------|---------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| I consider observation to be part of the lesson study process.         |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I do evaluation as part of the lesson study process.                   |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I put re-teaching, correction and review in the lesson study process.  |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I exchange lesson study results with my colleagues.                   |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I talk to colleagues about promoting lesson study.                    |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I always volunteer to cooperate with my colleagues.                   |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I avoid cooperating with others in solving academic problems.         |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I consider cooperation as a kind of effort to improve myself.         |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I have the necessary cooperation with the school principal for educational planning. |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I usually hide my interest in cooperation.                            |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I am an extrovert.                                                     |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I talk to my colleagues.                                              |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I spend time talking to students about various social issues.         |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I talk to others about learning new teaching methods.                 |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I talk to others to share my experiences.                             |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| When I use new methods, I get new energy.                             |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| When I use lesson study approach, my life style has changed.          |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I look at lesson study as an idea for creative thinking.              |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I consider myself responsible for my students.                        |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I am satisfied with my job.                                           |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I work hard in my work environment.                                   |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| Most of my colleagues accept me as a top teacher.                     |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I have a high sense of participation.                                 |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| Critical thinking is one of the principles of my life.                |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| It is very important for me to see my students happy.                 |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I understand the importance of the subjects well.                    |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I think I will make a lot of progress in my job.                     |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I am honest with my colleagues and the school management.            |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
| I consider law and order as examples of honesty.                      |                  |                         |             |                  |                        |                 |             |                  |                  |         |                  |                  |                  |                  |                  |                  |                  |                  |
Factors affecting the empowerment of primary school teachers based on the lesson study approach

| Individual factors | Organizational factors |
|--------------------|-----------------------|
| I consider the observance of justice in the classroom as an example of honesty. | The observance of justice in the classroom as an example of honesty. |
| I instill honesty in my students. | The observance of justice in the classroom as an example of honesty. |
| I do not lie under any circumstances. | The observance of justice in the classroom as an example of honesty. |
| My field of study is related to my job. | The observance of justice in the classroom as an example of honesty. |
| I have carried out a lot of research in my field of study. | The observance of justice in the classroom as an example of honesty. |
| I am interested in my field of study. | The observance of justice in the classroom as an example of honesty. |
| I learned lesson study at university. | The observance of justice in the classroom as an example of honesty. |
| The school structure encourages lesson study. | The observance of justice in the classroom as an example of honesty. |
| The school has less concentration on solutions to the existing problems. | The observance of justice in the classroom as an example of honesty. |
| The participatory structure is dominant in this school. | The observance of justice in the classroom as an example of honesty. |
| The mission of the educational system is quite obvious in the structure of this school. | The observance of justice in the classroom as an example of honesty. |
| The authority level in this school is quite clear. | The observance of justice in the classroom as an example of honesty. |
| This school values research. | The observance of justice in the classroom as an example of honesty. |
| Participation is a written and visible principle in this school. | The observance of justice in the classroom as an example of honesty. |
| School officials adapt to change. | The observance of justice in the classroom as an example of honesty. |
| The social values are accepted in this school. | The observance of justice in the classroom as an example of honesty. |
| Management has the necessary support from teachers. | The observance of justice in the classroom as an example of honesty. |
| Management supports the lesson study process. | The observance of justice in the classroom as an example of honesty. |
| The management allocates the necessary budget for this school. | The observance of justice in the classroom as an example of honesty. |
| The education organization has a well-codified plan for applying the lesson study approach and has handed it over to schools. | The observance of justice in the classroom as an example of honesty. |
| Teachers support each other while using teaching methods. | The observance of justice in the classroom as an example of honesty. |
| The management provides up-to-date technological equipment to school staff and students. | The observance of justice in the classroom as an example of honesty. |
| There is trust between school staff. | The observance of justice in the classroom as an example of honesty. |
| Management strives to institutionalize trust. | The observance of justice in the classroom as an example of honesty. |
| Teachers trust students and instill it in them. | The observance of justice in the classroom as an example of honesty. |
| School members readily accept environmental change based on their trust in management. | The observance of justice in the classroom as an example of honesty. |
| The school has been able to gain the trust of parents. | The observance of justice in the classroom as an example of honesty. |
| There is a close and positive relationship between teachers. | The observance of justice in the classroom as an example of honesty. |
| Group factors                                      | References |
|---------------------------------------------------|------------|
| There is appropriate relationship between students and their teacher. | I2, I6, I10, I14 |
| Parents have a close relationship with the school. | I1, I19, I10, I5 |
| Teachers have online communication between on social networks. | I6, I15, I17 |
| Teachers exchange their experiences in the form of brainstorming sessions. | I3, I18, I2 |
| Developing an action plan to develop lesson study in primary schools | I3, I17, I19 |
| Identifying harms of not using lesson study in schools. | I11, I3, I14, I12, I9 |
| Prioritizing educational programs to improve teachers' ability in the lesson study process | I10, I1, I12, I14 |
| Continuous evaluation of teacher competency development | I3, I17, I19 |
| Establishment of a specialized lesson study center in regional education | I11, I3, I14, I12, I9 |
| Needs assessment for subjects appropriate to the lesson study | I7, I3, I9, I12, I17 |
| Using information technology in teaching and empowering teachers | I6, I18, I10, I17, I4 |
| Keeping in touch with families | I10, I18, I1, I3, I4 |
| Providing facilities to skilled teachers | I3, I17, I19 |
| Teaching professional lesson study-relate skills to teachers | I6, I18, I10, I17, I4 |
Figure 1. Frequency of codes

The results of the analysis show that out of 120 available Components (items), 18 main components can be identified that are named based on the literature, and theories in the table below.

Table 2. Components identified after using existing literature and theories

| Construct                                      | Dimension       | Component            | Number of Item |
|------------------------------------------------|-----------------|----------------------|----------------|
| Empowerment of primary school teachers based   | Knowledge       | Content knowledge    | 11             |
| on the lesson study approach                   |                 | Teaching knowledge   | 12             |
|                                               |                 | Evaluation knowledge | 9              |
|                                               | Skill           | Intellectual skills  | 7              |
|                                               |                 | Teaching skills      | 8              |
|                                               |                 | Lesson study skills  | 0              |
|                                               | Attitude        | Willingness to cooperate | 5        |
|                                               |                 | Willingness to negotiate | 5        |
|                                               | Internal satisfaction |                      | 0              |
| Factors affecting the empowerment of primary   |                 | Factors affecting the empowerment of primary school teachers based on the approach | 7        |
| school teachers based on the approach         | Individual factors |                      | 4              |
|                                               |                 | Self-efficacy        | 0              |
|                                               |                 | Honesty              | 0              |
|                                               |                 | Education            | 0              |
|                                               | Organizational factors |                | 0              |
|                                               |                 | Organizational structure | 0         |
|                                               |                 | Organizational culture | 0            |
|                                               |                 | Organizational support | 10           |
|                                               | Group factors   |                      |                |

Empowerment of primary school teachers based on the lesson study approach
Factors affecting the empowerment of primary school teachers based on the lesson study approach

| Factors                        | Level | Value |
|--------------------------------|-------|-------|
| Individual factors            |       |       |
| Efficacy                      | 7     |       |
| Honesty                       | 5     |       |
| Education                     | 4     |       |
| Organizational factors        |       |       |
| Organizational structure      | 5     |       |
| Organizational culture        | 4     |       |
| Organizational support        | 6     |       |
| Group factors                 |       |       |
| Trust                          | 5     |       |
| Relationship                   | 5     |       |

Based on the above components, the final concept model is as follows:

![Figure 2. Final conceptual model](image-url)
4. Discussion

The aim of the present study to identify the dimensions, components, criteria, indices and indicators of primary school teachers' empowerment based on the lesson study approach. To this end, 20 experts were interviewed and data analysis was carried out using MAXQDA, which is professional software for analyzing data collected by qualitative and hybrid methods. After open, selective and axial coding, the components were determined. The results of factor analysis show that 18 main components were identified among the available indicators (items). Accordingly, the components of knowledge, skills, attitudes as constituent factors and individual, organizational and group factors were identified as effective factors.

This research finding is consistent with results of some studies. Keshtvarz, Anari Nejad (2019) showed a significant difference between the empowerment scores of teachers who participated in the lesson study process and teachers who did not participate in this process. The results also showed a significant difference between the above two groups in terms of standards of educational design and planning, creating and maintaining a learning atmosphere, implementing and conducting teaching, measuring and communicating with learning outcomes, evaluation and reflection on learning and teaching, more teacher's cooperation and activities to strengthen content knowledge and educational technology. Therefore, it can be stated that lesson study can lead to the development of teachers' abilities. Stokes, Curby (2020) showed that the lesson study approach has an impact on teachers' career development, while this approach increases teachers' support for teaching methods and lesson content. Jiang et al. (2019) also revealed that teacher empowerment is related to their job satisfaction and empowering organizational atmosphere.

When semi-structured interviews were performed with experts to identify the dimensions, components, criteria, indices and indicators of the lesson study, it was found that the components of knowledge, skills, attitudes were identified as constituent factors and individual, organizational and group factors to as effective factors. Before addressing the components and indicators of teacher empowerment with the lesson study approach, it is necessary to address this issue. It is obvious that empowerment is a vague and uncertain concept. Some define empowerment as enabling people to get things done. Keys et al. (2017) believe that professional empowerment involves a concerted effort in the educational environment to increase motivation of teachers, so that every teacher at its best wants to achieve it. Empowerment as a process and source of motivation help teachers achieve the best ability that is vital in today's modern world.

Teacher empowerment has a different scope ranging from the empowerment of other participants in the educational environment or teachers who work outside the education sector, and is defined according to their ability to participate in decision-making processes related to inclusive learning and teaching (Balkar, 2015). Upstream documents emphasize teacher empowerment, which indicates the importance of teacher empowerment. In this regard, great efforts have been made regarding teacher empowerment in Farhangian University. The strategic document of Farhangian University in the perspective of 1404 and the university's charter, goals and strategies based on empowerment and professional development, student teacher (practice teacher) training programs focused on the teaching profession. There are several environmental stimuli that affect the teacher empowerment. Among these, the effects of technology on the work environment can be considered effective in the need for teacher empowerment. Rapid technological changes changed the nature of work, and computers, robots, and fully automated devices have replaced routine jobs. These tools have made drastic changes in the type of skills required by individuals and members of the education system. Obviously, to meet such a challenge, teachers must be empowered, that is, they must grow in all aspects. On the other hand, increasing expectations from the educational system have increased the expectations of organizations in the educational system from their teachers. Teacher empowerment will increases satisfaction among teachers, students and parents. It also increases teachers' sense of commitment and belonging, increases teachers' sense of belonging to their jobs, and reduces stress, and accidents at school, and improves safety at school. In the present study, teacher empowerment has been investigated using the lesson study approach. Lesson study is a seemingly simple set of thoughtful and participatory procedure (collaborative reflective action).
Empowerment means designing a structure in which people, while controlling themselves, are willing to take on more responsibilities. An empowering organization creates conditions in which teachers take control of their working lives and grow enough to take on more responsibilities in the future. Empowerment is a structure that can break traditions. Empowered teachers have more ways to solve their problems. In these empowered schools, empowerment is actually the practice of trusting each other in education, exchanging opinions and respecting each other. Empowerment should be considered as a process of recognition and be used for growth and leadership. This process creates motivation and nurture law-abiding teachers. Teacher empowerment has received a lot of attention today because the education department with capable, committed, skilled, and motivated teachers will be better able to adapt to change and compete. Empowerment is the healthiest method to help teachers participate in the power process. This method creates a sense of trust, double energy; pride among teachers and their participation, responsibility and commitment are strengthened and ultimately will lead to professional development and growth of education. It was stated in the present study that primary teachers are more isolated than many of their peers outside of the education department and less enjoy interacting and cooperating with each other throughout the day. This is a warning sign that it is not compatible with today's progressive and evolving society, and for this reason, education is getting weaker. Therefore, one of the methods that helps to empower these teachers and triggers their professional development is the lesson study approach. Interaction between primary teachers, using the experiences of experienced teachers and active participation is the key to lesson study. The present study has investigated lesson study considering the importance and necessity of addressing teacher empowerment based on this approach. The results of the present study regard knowledge, skills and attitudes as three important components of this empowerment. Results also revealed that when we discuss teacher empowerment, we need to take into account the high-quality content and subject knowledge of teachers, their evaluation knowledge, attitude towards teaching and the type of lesson as well as their skills in presenting lessons, teaching, class management and evaluation. The present study investigated factors affecting the creation of empowered teachers who continue to teach based on lesson study approach and factors such as level of equality-seeking desires, participative character, honesty in teachers, type of organizational structure, dominant culture of schools and principals' support of lesson study approaches as well as factors such as building trust and constructive communication were all discussed, all of which affect the teacher empowerment. Related mechanisms were also proposed accordingly. Finally, the present study proposed a model that was taken from the identified components that constitute and affect the teacher empowerment according to the lesson study approach as well as executive mechanisms.

According to the research findings, it is recommended to employ primary school teachers who have relevant education and have learned lesson study. Law and order should be the priority of teachers. This law-abiding character should be visible in all areas ranging from attention to educational goals to classroom management. Education, give the school official the necessary authority in choosing the structure and, of course, paying attention to the framework of the educational system. Teachers should be active in social networks and have a dedicated lesson study group. Future researchers are recommended to conduct a research on the implementation and evaluation of the proposed model and to analyze the barriers ahead. Variables such as in-service training and political, cultural, social and economic systems in schools should also be taken into account.
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