

Teacher leadership and sustainability in adult elderly education

Reyhan Şekerci ^a, Ministry of National Education in Turkey, 07070 Konyaaltı/Antalya, Turkey,

<https://orcid.org/0000-0002-9348-2621>

Tayfun Yörük ^{* b}, Akdeniz University., 07070 Konyaaltı/Antalya, Turkey <https://orcid.org/0000-0002-4900-5705>

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Abstract

The purpose of this study was to reveal the views of administrators working in institutions providing adult elderly education on teacher leadership. Ten administrators, who were determined via convenience sampling which is among purposeful sampling methods, participated in this study using qualitative research method. The study was conducted in phenomenological design, which is among qualitative research designs. The interview technique was used to collect data in the study, thus, a semi-structured interview form was prepared and used for this process. The data were analyzed via content analysis technique. All the data acquired in the study were coded, various dimensions and appropriate themes for these dimensions were determined in accordance with the purpose of the study, and percentages and frequencies related to the themes were calculated and the views of the administrators on teacher leadership were revealed. As a result, the concept of an enriched environment, including cognitive tasks, such as elder education courses (sports, physical activity, artistic and skill studies), can form the basis for systematic assessment of possible interventions for successful aging. It provides another effective possibility to achieve better physical, physiological and cognitive improvements, especially in older adult. Further efforts are needed on the basis of teacher leadership in older education courses to reduce weakness and dependency among older adults and maintain independent physical and cognitive function, mental health and well-being.

Keywords: Adult Elderly Education, Education Management, Teacher Leadership;

* ADDRESS FOR CORRESPONDENCE: Tayfun YÖRÜK, Pınarbaşı, Akdeniz Ün., 07070 Konyaaltı/Antalya, Turkey
E-mail address: tayfun@akdeniz.edu.tr / Tel.: +90 507 927 65 23

1. Introduction

The concept of teacher leadership and its applications have gained a great acceleration in the last twenty years. Teachers have to take on the function of leadership more, in terms of both education and application levels. When examining the literature, it is seen that there is a great number of small-scale qualitative studies that define the conditions encouraging and questioning teacher leadership and its dimensions and features. However, little is known about the development process and effects of teacher leadership. In addition, there is no precise conceptual definition about the structure of teacher leadership or its reflection in application, yet. Future studies focusing on how teachers' organizational capacity affects professionalism, educational progress and students' learning, will improve teacher leadership applications even further (York-Barr & Duke, 2004).

For example, a study focusing on teacher leadership examines various interpretations and definitions in the literature. Especially the idea of activity theory is focused by examining the correlation between teacher leadership and distributed leadership. The study showed that there were certain important connections and coincidences between teacher leadership and distributed leadership. The study also discussed possible resistance sources against the idea that teachers are leaders in school and investigated how distributing leadership to teachers would contribute to the formation of professional learning communities inside and among schools (Harris, 2003a).

In another study, it was indicated that as limitations of leadership theories in schools became more evident, a movement formed toward teacher leadership characterized by some kind of leadership style in which teachers developed specialty by working in collaboration. This study investigated not only the possible advantages of teacher leadership, but also possible obstacles and opportunities for teacher leadership for the purpose of making teacher leadership function in practice. It was concluded that teacher leadership could have positive effects on school development, school and teacher effectiveness, teacher motivation and education; however, right conditions were required for teacher leadership to develop. In the study, it was also pointed out that there was no study on teacher leadership in England (Muijs & Harris, 2003).

The results of another exploratory study investigating teacher leadership roles in large cities, especially in K-8 school regions mentioned about development and performance of teacher leadership roles and revealed how these roles affect the environment where they were present. Thus, it was overemphasized that teacher leadership needed to be addressed as a matter of institutional development rather than only a matter of individual empowerment (Smylie & Danny, 1990).

In addition, the issue of leadership in school development is now on the research agenda of many countries. In other words, it has become inevitable in education to think about leadership and focus on teacher leaders and how they apply leadership. There is an evident belief indicating that school principal is the only source and the chief executive as leadership aspect, which strengthens the idea that the skills of reversing things in school and the leadership in certain individuals with these skills are 'heroic'. Sergiovanni notes: "It is understood that the superhero image of leadership does not work. And it is said that obligations and incentives are not powerful enough to function as tools that will drive our efforts to improve schools. In tomorrow's world, success will depend upon the ability of leaders to utilize the capacity of locals, to enhance sense and meaning, and to build communities of responsibility.", summarizing the present situation (Harris, 2003b).

Today, effective schools have to develop teacher leadership more than ever. Administrators are still obliged to meet multiple demands from many sources; however, they cannot be expected to specialize in all areas and their duty duration in a certain school should not be shorter than a teacher's

duty duration. In addition, as beginner teachers gain experience, they develop an urge to spread their effect to their schools beyond their classes and even their profession. In this respect, a variety of available leadership opportunities for potential teacher leaders should be reviewed by school administrators. It should always be stressed that school administrators play an important role in revealing teacher leadership and creating an integrative school culture (Danielson, 2007). For example, the survey data acquired from 1.762 teachers and 9.941 students in a large school region in Canada were used to investigate relative effects of school principals and teacher leadership on students and school participation. The results showed that administrators had a greater effect on student participation, compared to other leadership sources, thus, how school administrators guided in displaying leadership and types of leadership were emphasized (Leithwood & Jantzi, 1999).

Individuals who see their meaning in life and renew themselves by discovering their new dimensions will be able to do this for 'life', and be able to maintain it, and will also create societies that preserve their freshness. In this regard, it can be defined as the development movement from the individual to the society by carrying the elderly education briefly to the behavioral and attitude level of the individuals without limiting the aging to the concept of age. In addition, educational and instructional leadership is important for the development of societies and active aging. In addition, the population of older adults is growing faster, but most have physical, psychological, and social limitations (Ruiz-Montero, Chiva-Bartoll, Salvador-Garcia & González-García, 2020). Reducing social inequalities, especially in physical activity, has become a priority for public health (Czwikla, Boen, Cook, Jong, Harris, Hilz & Pischke, 2019).

On the other hand, there is a linear relationship between physical activity and health status, those who lead an active lifestyle generally live healthier and longer (Sallis, Matuszak, Baggish, Franklin, Chodzko-Zajko, Fletcher & Puffer, 2016; Banio, 2020; Morente-Oria, Ruiz-Montero, Chiva-Bartoll & González-Fernández, 2020; Bamidis, Vivas, Styliadis, Frantzidis, Klados, Schlee & Papageorgiou, 2014; Bauman, Merom, Bull, Buchner & Fiatarone Singh; 2016). The concept of an enriched environment, including cognitive tasks, such as older education courses (sports, physical activity, artistic and skill studies), can form the basis for systematic assessment of possible interventions for successful aging. It provides another effective possibility to achieve better physical, physiological and cognitive improvements, especially in older women. Further efforts are needed to reduce weakness and dependence among older adults and to maintain independent physical and cognitive function, mental health and well-being (Kraft, 2012; Ruiz-Montero, Castillo-Rodriguez, Mikalacki, Nebojsa & Korovljev, 2013).

Many countries have provided the concept of adult older to be widely understood and approached, especially as an important initiative to develop and optimize geriatric education. For example, the idea that the aging population in China will have various permanent effects on China caused the country to develop a national strategy on this issue (Fengmei & Fan, 2018). Considering the characteristics of the aging population, various strategies have been put into practice with various goals in order to encourage education with the idea of "high-level life enrichment through education" and to provide this service to the elderly, to integrate geriatric education into society and to develop wisdom education (Wang et al., 2017).

In a Russian study, the issue of formal and non-formal education for adult seniors is still under discussion. Therefore, the benefits of using the resources of non-formal education projects for the elderly are being investigated (Sorokin, 2020). In addition, the number of universities providing elderly education, which is called third stage universities, is increasing in developed countries. Some studies state that universities have positive effects on the elderly for the elderly who support lifelong learning

and serve people over 60 years old (Jun & Evans, 2019). The University of Szczecin in Poland offers university-level education for the elderly as part of lifelong learning. The aim of the education program is to use the experiences and potentials of the elderly in various areas of life and to develop their interests and hobbies. In this context, there are cinema, theater performance skills, fine arts, photography and cooking courses for retirees. With these courses, it is aimed to make the elderly productive and at the same time to transfer the traditions, in other words, the materialist heritage of their generations to future generations (Barbara, 2015).

Various examples of the elderly population's participation in life and lifelong learning are seen at different universities (Bahar & Basibuyuk, 2019). Older geriatric education received great acclaim from Akdeniz University in Turkey, Ege University, Mugla Sıtkı Kocman University as serving on university and college continues to be involved more. In line with this purpose, it is critical to find the opinions of the elderly individuals who attend adult aging education lessons developed within the scope of lifelong learning and the educators who design and offer this service, and to ensure that these lessons reach their goals, to maintain and develop them.

The answer to the following question was sought in this research, which was conducted in order to determine the views of the managers on elderly education organized in line with the sustainability of lifelong education for all these reasons:

1. What are the effects of teacher leadership and the views of managers on sustainability in institutions providing elderly education?

2. Materials and Methods

According to Karasar (2009) this study was conducted using descriptive screening model that tries to describe a case and subject separately. In order to do that description profoundly, qualitative research technique was used in the study. The study was conducted in phenomenological design, which is among qualitative research designs (Turgut, 2009). Thus, interview technique was used in the study to collect data and for that purpose, a semi-structured interview form was prepared.

Study group consisted of administrators working in a school, which provides informal education in Konyaalti district of Antalya province. In addition, convenience sampling which is among purposeful sampling methods was used in the study. The participants were coded as; administrators A1,A2,A3,A4,A5,A6,A7,A8,A9 and A10, according to the order of interviews (Kus, 2007; Mason, 2007; Patton, 1990; Rubbin & Rubbin, 1995; Yıldırım & Şimşek, 2011). When examining demographic characteristics of the administrators, it was observed that participants were equally distributed according to gender variable. Educational backgrounds of the participants was usually undergraduate and above. Majority of the participants had a seniority of ten years and above and all of them were senior and experienced administrators who had worked in the same institution for at least one year and above.

Interview questions were prepared on the basis of a literature review and were examined by a field expert. Since the interview form is semi-structured, it is open to be updated after each meeting, but before the first meeting, the interview questions were finalized based upon the feedback received from the field expert. There were ten questions in the form and all questions were about the views of the administrators working in informal education institutions on teacher leadership. The participants considered to be interviewed were informed about the purpose of the study and the administrators willing to participate in the study were determined on volunteerism basis. The researcher took notes

synchronously with the interviews. The interviews took approximately 30-50 minutes. They were conducted in offices in the course centers between May-June 2019.

In the study, the qualitative data acquired from the interviews were analyzed using content analysis, which is composed of the stages of coding, finding themes, and organizing the data according to codes and themes (Balci, 2004; Yıldırım & Şimşek, 2006). The answers given as opinions by participants recorded during the interviews were put in writing by the researchers in computer environment. Then, all the data acquired in the study were read many times and coded. During coding, various dimensions were determined in accordance with the purpose of the study and themes were categorized for these dimensions. Another researcher recoded the interview texts to provide reliability of the analyses. In order for validity and reliability to provide objectivity in a good qualitative study (Morse, Barrett, Mayan & Olson, 2002).

Spiers, by using Cappa analysis, it was seen that a consensus was achieved between coding of the researcher and another expert to a large extent and it was concluded that the process of coding was done in a reliable way.

3. Results

This section includes findings concerning the views of administrators working in informal education institutions on teacher leadership and interpretations of these findings.

3.1. Distribution of the Participants According to Their Demographic Characteristics

Table 1 shows distribution of the participants according to their age, gender, marital status, educational background, duration of professional service, duty and staff condition.

Table 1. Distribution of the Administrators According to Their Demographic Characteristics

Variable	Code	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	f	%
Age	22-42						√	√	√	√	√	5	50
	42-60		√	√	√	√						4	40
	60+	√										1	10
Gender	F			√	√			√		√	√	5	50
	M	√	√			√	√		√			5	50
Marital Status	S								√		√	2	40
	M	√	√	√	√	√	√	√		√		8	80
Educational Background	Undergraduate		√	√	√	√	√	√			√	7	70
	Postgraduate	√							√	√		3	30

	1-5												
	6-10									√	1	10	
Duration of Professional Service	11-15					√		√	√		3	30	
	16-20									√	1	10	
	20+	√		√	√	√		√			4	40	
	Staffed	√		√		√	√	√	√	√	7	70	
Staff Condition	Secondment					√				√	3	30	

As is seen in Table 1, half of the participants were older or younger than 42 years. Their gender was equally distributed and most of them were married. Majority of the administrators working in informal education had bachelor's degree. Most of them were staffed; whereas, some of them were secondment.

3.2. Findings

Analyzed the opinions of administrators on teacher leadership, a categorization under six themes is suitable to address the opinions in a clear way. The themes given in Table 2 inform us about the determinants of administrators' thoughts on teacher leadership:

Table 2. Themes acquired from transcripts of interviews

Theme	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	f	%
Core factor	√		√	√			√	√	√	√	7	70
Collective success			√	√					√		3	30
Distrustful attitudes and misuse		√			√	√					3	30
Unique qualifiers	√							√			2	20
Stableness									√	√	2	20
Active Key Players				√							1	10

As seen in Table 2, according to the content analysis performed during data analysis, a great majority of the opinions belong to the theme titled "Core factor". In that, it is understood that administrators see teacher leadership as "sine qua non". Below, there can be found some part of the opinions supporting this theme:

"I adopt teacher leadership especially in public training centers. Teacher leadership is essential in such education institutions with scattered education areas or distant course areas." (A1,1)

"It is actually something we do all the time and it should be. It is so important to me." (A3,1)

"However, the leadership behaviors I display as a teacher in different areas are too precious, both for myself and administrators. Therefore, I believe in teacher leadership a lot." (A7,1)

There are also opinions that put stage the collective success in school environment. Three administrators out of ten state that by increased level of teacher leadership result in collective success. Here are some opinions:

"As long as my teacher colleagues are fine, I am fine. If not, it will not work out no matter how perfect my assistant principal colleagues are. I even follow teacher groups in WhatsApp to keep teacher leadership in my institution alive. I often share things there, reply immediately and try to make my teacher colleagues feel that they are not alone." (A3, 2)

"If teachers are strong and have dominant leadership skills in a school where I am assigned to, I prepare a good exhibition at the end of every year, invite top administrators and do my show without fearing to disgrace myself. I have always been successful. My organizations are always popular. Why? Because I have never worked in a school where teachers are passivated and ignored." (A4, 2)

"In the national education, it is somehow believed that senior old teachers can lead better. They never give you a chance. For teaching, it is more important to grow older than to have leadership skills, probably out of respect. Therefore, I believe that it is necessary to benefit from leadership skills of especially young teachers who are new in their profession. For example, let's say a project will be carried out abroad. Who do you think can carry out the project the best; the eldest teacher or the teacher with a higher language proficiency who has been abroad before? Actually, the younger and experienced teacher can lead and carry out the project." (A9, 2)

Although there are positive opinions supporting teacher leadership, it is inevitable that unfortunately there are also opinions that are against the concept. Some examples are given below:

"The staffed teachers obviously don't care about anything. Being assigned to such a comfortable setting after formal education causes them to be slack. Thus, I don't frankly trust teachers in informal education. I always try to keep things under control and often warn my assistant principal colleagues for that." (A2, 3).

"I have encountered too many negative examples, such as those saying that they were in the classroom, but were actually somewhere else or those saying that they were sick, but were actually on a trip. ... As the conditions of informal education are better than formal education, it is open to misuse a lot. It needs constant supervision and following. Especially evening and weekend courses are not safe at all. Therefore, we need to be very careful." (A5, 3)

"Honestly, I don't believe in teacher leadership. Don't they have a capacity to do it? Of course, they do. They have knowledge, skills, experience and everything. But in general, there is a slackness. Especially in informal education. When it comes to work, no one is around. But when it comes to course fees, everyone is there. If you accidentally forget to pay their 1-hour course fee, you will immediately find them in your room calling you to account." (A6, 3)

Two out of ten administrators make a connection that while performing their leadership styles teachers are alone warriors and this makes teachers unique qualifiers. Opinions about this themes are:

The course areas are so distant from each other that the teacher is all alone. No matter how often we say that we are with him/her, the teacher is alone in her/his problems. We are able to intervene or assist in an incident much later. Therefore, I adopt teacher leadership especially in public training centers (A1, 4).

It is surely beyond doubt that our teachers are valuable, important and they have great contributions and labor in every respect... I do not know if I think wrong, but not everyone is supposed to lead in educational organizations. How about classroom management? Isn't it already leadership? Isn't teaching leadership? (A8, 4).

Even though teachers and teacher leadership is vital for adult elderly education, there are also some problems faced by young teachers during their leadership performances, according to the views of administrators:

As a matter of fact, I never really had the opportunity because of senior teachers during the years I was teaching. In the national education, it is somehow believed that senior old teachers can lead better. They never give you a chance. For teaching, it is more important to grow older than to have leadership skills, probably out of respect. Therefore, I believe that it is necessary to benefit from leadership skills of especially young teachers who are new in their profession (A9, 5).

The teacher only teaches in the classroom; she/he has nothing to do with leadership. This immediately reminded me of classroom management course that we had taken during our undergraduate study. Apart from that, it reminded me of teachers assigned on special days and celebrations. They are certain teachers, anyway. Always the same teachers are assigned. Others keep away from being assigned (A10, 5).

However, although some negative opinions are put into stage by some administrators, one of the administrators think that teachers are active key players for the educational environment by their educational leadership ability. According to administrator's view, institutes are nothing without teacher leadership.

I have seen too many kinds of administration and leadership. But I know that if the leadership of teachers is dominant, there is success and if the leadership of administrators is dominant, everything is under constrain. I would not like to be present in such an environment. I would immediately demand to be assigned to somewhere else. If teachers are strong and have dominant leadership skills in a school where I am assigned to, I prepare a good exhibition at the end of every year, invite top administrators and do my show without fearing to disgrace myself. I have always been successful (A4, 6).

4. Discussion

When considering the views of administrators in general, the administrators stated that teacher leadership made or could make a professional and institutional contribution. They indicated that teacher leadership behaviors were an advantage for them and these behaviors accelerated institutional works, which was evaluated as a positive development for institutions working with distant course areas. Harris and Muijs (2013) mentioned that this integration and unity could be experienced in teacher leadership and professional and institutional leadership would be strengthened. On the other hand, some administrators presented negative views that they did not expect leadership skills from teachers within the scope of teacher leadership, which was quite noteworthy.

One of the administrators mentioned the skill and frequency of using social networks in teacher leadership development and stressed its possible contributions to teacher leadership development. A similar finding was discovered by Polizzi et al. (2019), based on surveys and opinions used to produce qualitative and quantitative data via social network analysis. They defined the network data created via a social network research and discussion activity with science teachers, in a teacher leadership development program. The data contain social network maps concerning a quest of specialty, which is resolved with contacts in school, state, regional, national and international spheres of influence in content and / or pedagogy teaching. The data also contain activities and conversations of teachers in their own educational environment. With this study, it was aimed to interpret the data and “use visual network scales in teacher leadership development”.

It is thought that distant and independent course areas and uncertainty of assignment of administrators and especially teachers in informal education institutions cause labor and work loss and the difference in viewpoints of staffed or temporary administrators affects educational activities negatively. Also, Scott (2011) mentioned similar formal obstacles in teacher leadership frequently. In addition, as teachers are not fully paid additional course fees during seminar periods in informal education institutions even today, it is mentioned that there is a perception stating that seminar studies produce nothing but literature reviews and since literature reviews are relative, seminar periods turn out to be unproductive and empty. Even if additional course fees are not paid during these periods, it is thought that teacher leadership applications in informal education institutions will be very useful for administrators and teachers in charge. In this context, it is possible to assert that joint studies presented within the scope of teacher leadership roles which are one of the results of change and development processes in schools, have mostly affected the administrator-teacher relationships (Murphy, 2005; Burke, 2009). Buckner and McDowelle state that school administrators can fulfil a number of roles in teacher leadership development (Can, 2006).

In addition, majority of the administrators who participated in the study considered that it was wrong to expect all of leadership and administrative skills only from the administrators in charge. Some of the administrators stressed the necessity of attributing leadership skills only to administrators, which was interesting. However, the administrators still defended that all participants working in the institution had to be included in administrative processes. Also in the definition of teacher leadership, an attribution was made to a type of leadership in which teachers and administrators as a whole are affected by leadership processes, rather than attributing to teachers or administrators only (York-Barr & Duke, 2004; Harris & Muijs, 2004). A particular emphasis was laid on the necessity for teachers to acquire leadership skills and to strengthen teacher leadership in areas aimed at flexible, independent and creative educational activities, such as informal education institutions. Indeed, it was stated that renewing the administrators’ job definitions that are made once every six months or once a year, instead of charging them only with certain areas or regions and changing and transforming the responsible areas, would contribute to the development of leadership skills of the administrators, prevent certain teachers from being repeatedly assigned and thus, strengthen teacher leadership. MacBeath (2019) examined different thinking styles requiring an attentive study on where leadership could be, where intervention would be performed and who would make decisions and how, on the basis of Cambridge's five basic principles concerning learning and stressed the necessity to discuss learning leadership more as a matter of what students do today or how they learn, more, although what administrators or teachers do for leadership is often investigated.

When it comes to elderly education, the role of teacher leadership on the learning styles of the elderly also becomes important. Views toward learning and connection with the teacher affect one's learning capabilities. All these two domains openly have impacts on the elderly person's competence to learn and must be taken into consideration when planning educational events (Beare, 1999; Phillips, 1999). In addition, unlike a typical learning style as young people and children learn, the education design mentioned in the learning of older people should also be tailored to their needs (Sayago, Forbes & Blatt, 2013). It is clear that this adjustment is directly related to the "holistic success" and "active key players" dimensions of teacher leadership achieved in the study.

The results of the study conducted by Tighes, Barnes, Connor and Steadman (2013) are similar to the "unique qualifiers" dimension of this study. According to the results of the related work, teachers and therefore teacher leadership is the most important element of success in adult education. In addition, the reflection of teachers' willingness to their leadership understanding reveals how important stakeholders they are in this process. The understanding created by this situation determines them as " unique qualifiers ".

As a result, it is necessary to organize different courses for the requests and suggestions of the participants, the geographical region and the interests and needs of the elderly in the planning of the courses opened within the scope of elderly care and education. It may differ even by countries and regions. Failure to open courses suitable for needs and degrees, causes loss of labor and labor in terms of education economy. For this reason, opening different courses for the needs of the local people will be very beneficial in terms of education planning and economy. This shows that there should be a different understanding of leadership in the management of such institutions. For this reason, it will be appropriate and more useful to display and support original, creative, flexible and independent leadership styles such as teacher leadership instead of classical management approaches in order to maintain these trainings in a healthy and sustainable manner.

References

- Bahar, N. T., & Basibuyuk, H. H. (2019). Evaluation of Wellbeing of Students of the University of Refreshing over 60 years of age in Antalya. *Journal of Ankara Health Sciences*, 8(1), 160-173.
- Balci, A. (2004). *Sosyal bilimlerde araştırma*. Ankara, Turkey: Pegem Yayıncılık.
- Bamidis, P. D., Vivas, A. B., Styliadis, C., Frantzidis, C., Klados, M., Schlee, W., & Papageorgiou, S. G. (2014). A review of physical and cognitive interventions in aging. *Neuroscience & Biobehavioral Reviews*, 44, 206-220. <https://doi.org/10.1016/j.neubiorev.2014.03.019>
- Banio, A. (2020). The Influence of Latin Dance Classes on the Improvement of Life Quality of Elderly People in Europe. *Sustainability*, 12, 2155. <https://doi.org/10.3390/su12062155>
- Barbara, K. (2015). Elderly people in the system of academic education. *Education Throughout Life: Continuing Education for Sustainable Development*, 13, 229-231. URL: <https://cyberleninka.ru/article/n/elderly-people-in-the-system-of-academic-education> (accessed: 02.02.2020).
- Bauman, A., Merom, D., Bull, F. C., Buchner, D. M., & Fiatarone Singh, M. A. (2016). Updating the evidence for physical activity: summative reviews of the epidemiological evidence, prevalence, and interventions to promote "active aging". *The gerontologist*, 56(Suppl_2), 268-280. <https://doi.org/10.1093/geront/gnw031>
- Beare, P.G. (1999). Health teaching and compliance. In M. Stanley & P.G. Beare (Eds.), *Gerontological nursing: A health promotion/protection approach* (2nd ed., pp. 55–63). Philadelphia: F.A. Davis.

- Burke, K. A. (2009). *The principal's role in supporting teacher leadership and building capacity: teacher and administrator perspectives*. (Unpublished doctoral dissertation). San Diego State University, USA.
- Can, N. (2006). Öğretmen liderliği ve engelleri. *Sosyal Bilimler Araştırmaları Dergisi*, 2, 137-161.
- Czwikla, G., Boen, F., Cook, D. G., de Jong, J., Harris, T., Hilz, L. K., & Pischke, C. R. (2019). Equity-specific effects of interventions to promote physical activity among middle-aged and older adults: development of a collaborative equity-specific re-analysis strategy. *International journal of environmental research and public health*, 16(17), 3195. <https://doi.org/10.3390/ijerph16173195>
- Danielson, C. (2007). The many faces of leadership. *Educational leadership*, 65(1), 14-19.
- Fengmei, J. & Fan, J. (2018). New Ideas for the Development of Elderly Education in the Context of Lifelong Education-Based on the Innovation Practice of Wenzhou Elderly Education. *Journal of Beijing Xuanwu Hongqi Spare-time University*, 2 (1).
- Harris, A. & Muijs, D. (2004). *Improving schools through teacher leadership*. UK: McGraw-Hill Education.
- Harris, A. (2003a). Teacher leadership and school improvement. In A. Harris, C. Day, C. Hopkins, M. Hadfield, A. Hargreaves, C. Chapman (Eds.), *Effective leadership for school improvement* (pp. 82-93). New York, USA: Routledge Falmer.
- Harris, A. (2003b). Teacher leadership and school improvement. In A. Harris, C. Day, C. Hopkins, M. Hadfield, A. Hargreaves, C. Chapman (Eds.), *Effective leadership for school improvement* (pp. 82-93). New York, USA: Routledge Falmer.
- Harris, A. (2003). Teacher leadership as distributed leadership: heresy, fantasy or possibility? *School leadership & management*, 23(3), 313-324. <https://doi.org/10.1080/1363243032000112801>
- Jun, S.K. & Evans, K. (2019) Third Age Education and the Senior University Movement in South Korea. In Formosa M. (Eds.), *The University of the Third Age and Active Ageing: International Perspectives on Aging* (pp. 219-231). Cham, Switzerland: Springer.
- Karasar, N. (2009). *Bilimsel araştırma yöntemi*. Ankara, Turkey: Nobel Yayın Dağıtım.
- Kraft, E. (2012). Cognitive function, physical activity, and aging: possible biological links and implications for multimodal interventions. *Aging, Neuropsychology, and Cognition*, 19(1-2), 248-263. <https://doi.org/10.1080/13825585.2011.645010>
- Kus, E. (2007). *Nitel-Nitel Araştırma Teknikleri*. (2nd ed.). Ankara, Turkey: Anı Yayıncılık.
- Leithwood, K. & Jantzi, D. (1999). The relative effects of principal and teacher sources of leadership on student engagement with school. *Educational administration quarterly*, 35(5), 679-706. <https://doi.org/10.1177/0013161X99355002>
- MacBeath, J. (2019). Leadership for learning. In T. Townsend (Ed.), *Leading learning in schools: Instructional leadership and leadership for learning* (pp. 49-73). London, UK: Palgrave Macmillan.
- Mason J. (2002). *Qualitative researching*. (2nd ed.). London, UK: Sage Publications Ltd.
- Morente-Oria, H., Ruiz-Montero, P.J., Chiva-Bartoll, Ó., & González-Fernández, F.T. (2020). Effects of 8-Weeks Concurrent Strength and Aerobic Training on Body Composition, Physiological and Cognitive Performance in Older Adult Women. *Sustainability*, 12, 1944. <https://doi.org/10.3390/su12051944>
- Morse, J. M., Barrett, M., Mayan, M., Olson, K. & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1(2), 13-22. <https://doi.org/10.1177/160940690200100202>

- Muijs, D. & Harris, A. (2003). Teacher leadership—Improvement through empowerment? An overview of the literature. *Educational Management & Administration*, 31(4), 437-448. <https://doi.org/10.1177/0263211X030314007>
- Murphy, J. (2005). *Connecting teacher leadership and school improvement*. USA: Corwin Press.
- Patton, M., Q. (1990). *Qualitative evaluation and research*. (2nd ed.). California, USA: SagePub. Inc.
- Phillips, L.D. (1999). Patient education: Understanding the process to maximize time and outcomes. *Journal of Intravenous Nursing*, 22(1), 19–35.
- Polizzi, S. J., Ofem, B., Coyle, W., Lundquist, K., & Rushton, G. T. (2019). Social Network Data from Teacher Leader Development. *Data in Brief*, 25, 104182. <https://doi.org/10.1016/j.dib.2019.104182>
- Rubin, H. & Rubin, I. (1995). *Qualitative interviewing: The art of hearing data*. ThousandOaks, CA: Sage.
- Ruiz-Montero, P. J., Castillo-Rodriguez, A., Mikalacki, M., Nebojsa, C., & Korovljev, D. (2013). Previous anthropometric measures in adult and elderly Serbian women to physical and educational program of pilates and aerobic. *International Journal Morpholog*, 31(4), 1263-1268. <http://dx.doi.org/10.4067/S0717-95022013000400019>
- Ruiz-Montero, P.J., Chiva-Bartoll, O., Salvador-García, C., & González-García, C. (2020). Learning with Older Adults through Intergenerational Service Learning in Physical Education Teacher Education. *Sustainability*, 12, 1127-1146. <https://doi.org/10.3390/su12031127>
- Sallis, R. E., Matuszak, J. M., Baggish, A. L., Franklin, B. A., Chodzko-Zajko, W., Fletcher, B. J., & Puffer, J. C. (2016). Call to action on making physical activity assessment and prescription a medical standard of care. *Current sports medicine reports*, 15(3), 207-214. doi: 10.1249/JSR.0000000000000249
- Sayago, S., Forbes, P. & Blat, J. (2013) Older People Becoming Successful ICT Learners Over Time: Challenges and Strategies Through an Ethnographical Lens. *Educational Gerontology*, 39(7), 527-544. <https://doi.org/10.1080/03601277.2012.703583>
- Scott, P. D. (2011). *Teacher Leadership Development at the Second Career Stage: Influential Factors, Challenges, and Systems Implications*. (Unpublished doctoral dissertation). University of Washington, USA.
- Smylie, M. A. & Denny, J. W. (1990). Teacher leadership: Tensions and ambiguities in organizational perspective. *Educational administration quarterly*, 26 (3), 235-259. <https://doi.org/10.1177/0013161X90026003003>
- Sorokin, G. G. (2020). Method for influencing the development of elderly education in Russia. *Amazonia Investiga*, 9(25), 88-98. <https://amazoniainvestiga.info/index.php/amazonia/article/view/1031>
- Tighe, E.L., Barnes, A.E., Connor, C.M. & Steadman, S.C. (2013). Defining Success in Adult Basic Education Settings: Multiple Stakeholders, Multiple Perspectives. *Reading Research Quarterly*, 48 (4), 415-435. <https://doi.org/10.1002/rrq.57>
- Turgut, Y. (2009). Verilerin kaydedilmesi, analizi, yorumlanması: nicel ve nitel. In A. Tanrıoğen (Ed.) *Bilimsel araştırma yöntemleri* (pp. 193-247). Ankara: Anı Yayıncılık: Ankara.
- Wang, L., Sun, J., & Chen, S. (2017, December). Research on the Development Strategy of Senior Life Enrichment through Education and the Elderly Education in China. In *Proceeding of the 2017 International Conference on Economic Development and Education Management (ICEDEM 2017)*. Atlantis Press. <https://doi.org/10.2991/icedem-17.2017.48>
- Yildirim, A. & Simsek, H. (2006). *Sosyal bilimlerde araştırma yöntemleri*. (6th ed.). Ankara, Turkey Seçkin Yayıncılık.
- Yildirim, A. & Simsek, H. (2011). *Sosyal bilimlerde nitel araştırma yöntemleri*. (8th ed.). Ankara, Turkey: Seçkin Yayıncılık.

Şekerci, R & Yörük, T., (2020). Teacher leadership and sustainability in adult elderly education. *Cypriot Journal of Educational Science*. 15(3), 433-445. DOI: 10.18844/cjes.v%vi%i.4909

York-Barr, J. & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of educational research*, 74(3), 255-316.
<https://doi.org/10.3102/00346543074003255>