

TEACHERS' INFORMAL LEARNING IN THE CONTEXT OF DEVELOPMENT: RESOURCES, BARRIERS, AND MOTIVATION

Abstract: This research focuses on teachers' professional learning. In this context, the purpose of the research is to determine the informal learning resources, motivations and barriers in the learning process from the teachers' perspective. In the research, one of the qualitative methods, basic qualitative research design was used. Participants of the study consisted of 21 teachers who were determined with maximum diversity sampling. Research data were collected through face-to-face interviews with the participants. The semi-structured interview form prepared by the researchers was used in the interviews. The data obtained as a result of the interviews were transferred to the computer program and analyzed by content analysis method. Three themes were determined as a result of the analysis. These are informal learning resources, learning motivation and professional learning barriers. Teachers' informal learning resources are divided into two sub-themes as interactive and personal, while learning motivation is divided into two sub-themes as intrinsic and extrinsic sources of motivation. The barriers to the learning process are divided into four sub-themes. These are personal barriers, school-related barriers, work-related barriers, and barriers caused by central policies. Since teachers have different kinds of learning methods, creating the sources that support these methods, linking the teachers' professional developments with their career progressions and averting the dilemmas caused by work and family perceptions and transforming the schools into learning environments are the main suggestions made as a result of the research.

Keywords: informal learning, professional development, learning resources, learning motivation, teaching profession

Çelik, Kazım, PhD

Full Professor
Education Faculty
Pamukkale University
Turkey
Contact:
E-mail: kcelik@pau.edu.tr
ORCID: 0000-0001-7319-6567

Çelik, Osman Tayyar, PhD

Assistant Professor
Faculty of Health Sciences
Inonu University
Turkey
Contact:
E-mail: otayyar44@gmail.com
ORCID: 0000-0003-3951-7261

Kahraman, Ümit, PhD

Assistant Professor
Faculty of Health Sciences
Bilecik Seyh Edebali University
Turkey
Contact:
Email: drumitkahraman@gmail.com
ORCID: 0000-0002-4547-6753

INTRODUCTION

While the professional development of teachers has become the focus of research in recent years, it has been considered as a way of improving teachers' qualifications in the documents about education policies. Education systems' achieving their purposes and student success largely depends on teachers' professional competencies and their abilities to employ them (İlğan, 2020; Yaylacı, 2013). Apart from this, advancements in information and communication technologies (Gürkan, Başaran & Büyüköztürk, 2019), success rate of reforms, consistent competitiveness of education system in international areas (Bayar, 2014), improving the classroom activities necessitate consistent professional development for teachers. Moreover, teachers' capitals are their knowledge, skills and attitudes (Jeong, Han, Lee, Sunalai & Yoon, 2018). Therefore, teachers are expected to learn until the end of their careers (Hoekstra, 2007). Within this scope, teachers' formal and informal learning sources, learning motivations, barriers to professional development and their reflections on intra-class activities have begun to be widely discussed in the literature (Avidov-Ungar, 2016; Can, 2019; Kyndt, Gijbels, Grosemans & Donche, 2016; Thomson & Turner, 2015).

There is a consensus among researchers about the effect of teachers' professional learning on student success and school success (Scribner, 2003). The positive effect of teachers' professional development on students' learning has also been demonstrated by empirical research (Buczynski & Hansen, 2010; Wei, Darling-Hammond, Andree, Richardson & Orphnaos, 2009; Yoon, Duncan, Lee, Scarloss & Shapley, 2007). With the increase in studies that reveal the positive effect of professional learning on classroom practices and student success, teachers' professional development resources, barriers, and support structures have become an important component of international evaluation studies such as TALIS, PISA, and TIMSS. This has caused countries to come up with alternative ways to support teachers' learning in the context of their professional development. In this context, in-service training practices, which have become traditional in recent years in Turkey, are criticized (Uştu, Taş & Sever, 2016; Yalçın İncik & Akbay, 2018), and teachers' informal and formal learning practices are discussed in recent studies (Bektaş, Kılınc & Gümüş, 2020; Can, 2019; Özgenel, 2019).

Although there is a wide range of studies in international literature about teachers' informal learning resources, professional development, motivation and barriers, Turkey might be asserted to be deprived of such a wide literature in terms of teachers' informal learning practices. In that context, the sources used by teachers for informal learning, the barriers to the professional development and teachers' motivation sources are the notions that led to this research.

TEACHERS' INFORMAL LEARNING RESOURCES IN THE CONTEXT OF PROFESSIONAL DEVELOPMENT

Teachers' professional development has been a subject matter discussed under the title of in-service training for many years. Being officially organized, in-service trainings are the activities in which teachers passively participate and scholars exchange their knowledge and experience on various issues. There are studies in the literature that support this point of view (Aycacı, Bakırcı ve Yıldız, 2014; Kubat, 2018). Recently, teachers have started to be seen as students who can both lead and formulate their learnings and needs, triggering the concept of professional learning to be more common compared to professional development (Labone & Long, 2016; Louws, Meirink, Veen & Driel, 2017;). The change in this perspective represents the transition to the constructivist approach among the knowledge-transfer approaches in the class, and this new perspective has led suchlike change to be formed in the models of professional learning as well (Labone & Long, 2016). Therefore, professional learning has started to be handled in the body of literature both as informal and formal learning opportunities and as changes in teachers' behaviours, abilities and knowledge for improving in-class practices (Hoekstra & Korthagen, 2011). Likewise, in this research, teachers have been considered as professionals who are aware of their learning needs and take on the responsibility of learning from informal sources by using their learning methods.

Teachers' professional learning contains various designed learning methods, which improve teachers' abilities, knowledge and teaching applications, encourage their personal, social and emotional improvements and eventually affect learning outcomes of students in a positive way (Darling-Hammond et al. 2009). Teachers' learning might be in formal, informal or incidental ways. No consensus has been reached among the scholars on drawing a distinction between these methods. However, the environment where learning takes place, formalness, being scheduled, being started by someone and eventually the purpose of learning separate them from each other.

Being known as common learning and unofficial learning, informal learning is generally confused with formal learning. Livingston (2001) describes informal learning as activities which include individuals' seeking for their sense of knowledge, ability and perception, taking place apart from educational programs organized by institutions. Yet, Kyndt et al. (2014) describe informal learning as learning opportunities characterized by lack of organization and planning in terms of context, aid, period, and aims of learning. Moreover, by stressing the self-orientation of a person, Jeong et al. (2018) define informal learning as collective and personal acquisition of knowledge and ability which is started by individuals to serve the purposes of an individual or institution. Being named as organized education, formal education represents activities whose characteristics are defined as being aided and structured in terms of their aims, context and instructional scaffolding by educational institution, checked by teacher or directory and result either in certification or receiving bonuses (Levenberg & Caspi, 2010). Within this scope, it is possible to sum up differences between formal and informal education as follows (Fraut; 2004; Donitsa-Schmidt & Zuzovsky, 2020; Kyndt, Dochy & Nijs, 2008; Lecat, Beusaert & Raemdonck, 2018):

- While the aims of informal learning are determined by individuals depending on their needs, the aims of formal learning are determined by institutions.
- While formal learning is actualized in more structured, class-like environments, informal learning generally does not require a specific environment, even an instructor.
- While informal learning is planned by individuals without being based on any curriculum, formal learning is based on curriculum planned by institution.
- Whereas informal learning is done voluntarily, formal learning emerges as a necessity.

Some researchers (Hoekstra, Brekelmans, Beijaard & Korthagen, 2009; Shirrell, Hopkins & Spillane, 2019) confine informal learning to the learning process in workplaces by asserting that informal learning is embedded in ordinary work routines, some others (Opfer, Pedder & Lavicza, 2010; Watkins & Marsick, 1992) broaden the concept of informal learning by taking incidental learning into account as well. Taking time focus into consideration based on if it is planned or not, Eraut (2004) discussed incidental learning as an informal learning in his typology. In this typology, there are three types of learning. These are incidental/implicit learning, reactive learning and intentional learning. Incidental/implicit learning is a type of learning which is unplanned and free from any conscious attempt. Reactive learning is unplanned, yet, when an opportunity shows up, the individual attempts to learn. Intentional learning includes both planned and conscious activities. Depending on intention and consciousness, Schugurensky (2000) defined three types of informal learning as well. These are self-oriented learning (both conscious and intended), incidental learning (conscious but unintended), implicit learning (neither conscious nor intended). In this research, informal learning was taken as a process in which teachers undertake their professional learning to meet their needs as self-oriented, conscious and intentional individuals.

Researchers have tried to determine and categorize widely-used informal learning resources to distinguish it from the other learning types. Meirink, Meijer and Verloop (2007) and Hoekstra et al. (2009) classified informal learning into four major types: (1) learning by experimentation, (2) learning by consultation, (3) learning by doing, (4) learning by reflection. Kwakman (2003), on the other hand, classified it as learning by reading, trying, reflection and collaboration. In their systematic analysis research to analyze the outcomes of informal learning, Kyndt et al. (2016) came to the conclusion that there are 129 unique learning activities in informal learning for teachers. The most-stated informal learning activities in the research were determined as reading educational literature, observation, collaboration with colleagues, reflection, learning by doing/experiencing, surfing the internet and social media, experimentation, trial and error, exchange of ideas (unspecified), sharing the materials and sources and finally storytelling. Researchers came up with a typology in which informal learning sources were grouped under seven categories. In this typology, informal learning sources were classified as communication and debate with others, trying and testing, learning from others without interaction, personal activities, reflection on action, participation in extracurricular activities and confrontation with difficulties. Lohman (2006) described informal learning resources without classifying as; (1) speaking with others, (2) collaboration, (3) observing colleagues, (4) sharing the materials and sources with others, (5) looking up on the internet, (6) scanning the professional journals and publications, (7) trial and error, (8) pondering on actions. Apart from these, reading a book, watching education-related TV channels, attending conferences and workshops, taking up courses for skills development, school and museum visits, discussion with colleagues and etc. can be regarded as informal

learning resources. Since in-service trainings are centrally carried out by The Ministry of National Education (MoNE) within a certain plan and program, they were not considered as informal learning resources in this research.

Although teachers have many formal and informal learning sources, there are many barriers to accessing these sources and starting a learning process. They might be grouped as personal, contextual and job-related factors. Kwakman (2003) stated that professional attitudes, exhaustion, value placed on learning, work diversity, work pressure and autonomy might be the barriers to professional learning. Workplace relationships, support by school administration and school culture might be of contextual factors. Kedzior and Fifield (2004) classified these barriers as school factor, region factor, time structure, content of professional learning and cost. While micro (at school level) and macro (policy) barriers to teachers' informal learnings might affect the accessibility of learning sources, they may also cause motivation loss for teachers.

One of the primary concerns about professional learning is the question of "What are the factors motivating teachers for professional learning?" Motivation is seen as a crucial antecedent of participation in professional development by researchers (Bigsby & Firestone, 2017; Hoekstra, 2007). Likewise, having access to a great number of sources does not guarantee teachers' striving for professional learning activities. The distinctive feature of informal learning is that it is started and maintained by students. Therefore, motivational factors leading personal behaviours greatly affect the initiation and maintainance of the learning process. Based on the self-determination theory, in de Wal, den Brok, Hooijer, Martens and van den Beemt (2014) found that teachers who had more intrinsic motivation participated more in professional learning activities. Gorozidis and G. Papaioannou (2014) found that autonomous motivation is a significant predictor of teachers' participation in professional development activities. Thus, teachers' learning motivation can be considered as a significant variable that might affect the professional learning process.

PURPOSE AND IMPORTANCE OF THE RESEARCH

Depending on the centralized structure of the education system in Turkey, in-service trainings organized by MoNE have been utilized as a model of professional development for years. However, courses and seminars included in in-service training which is a traditional model of professional development, are far from ensuring the expected contribution to teachers' qualifications. These programs do not include some particulars such as collaboration between teachers, professional sharing, collective participation, and interactive learning (Eroğlu & Özbek, 2018). Bellibaş and Gümüş (2016) claim that the centralized structure of MoNE, which influences the execution of all educational programs, prevents sustainable and effective professional development activities from being pervasive among teachers. Beside this, according to 2019-2020 statistics, 1.117.686 teachers serve in MoNE (MoNE, 2020). Therefore, access to in-service trainings might not always be possible for teachers.

As an alternative to in-service trainings, focusing on teachers' informal learning resources can make contributions to the establishment of supportive elements in schools and improvement of central policies that may support teachers' professional development. In this context, this research aimed to determine teachers' informal learning resources, their motivation and barriers to professional learning. In accordance with this purpose, the answers to the following questions were sought:

- What are teachers' informal learning resources in the context of professional development?
- What are the barriers to teachers' professional learning?
- What are the factors motivating teachers for professional learning?

METHOD

RESEARCH DESIGN

Qualitative research method was used in this research, which aims to determine teachers' informal learning resources and their motivation and barriers to professional learnings. Explaining how individuals form the interaction between the real and social life is the main goal in basic qualitative research. In this research type, the data can be collected through the interviews which are modulated in accordance with the theoretical part of the research. In qualitative research, peoples' lives and the meanings attributed to their experiences with their lives are analyzed by researchers (Merriam, 2009).

STUDY GROUP

Study group of this research consists of 21 teachers who served in public schools located in Denizli within the years of 2019-2020. The maximum diversity sampling method was used in the study according to gender, school type and socio-economic level of the school. Teachers participated in the study voluntarily. Teachers in the study group serve in different schools and grades. Teachers were given the codes between M1- M8 and F1 – F13. Information about the participants are illustrated in Table 1.

Having analyzed the demographic data of the participants, it is seen that eight participants are male and thirteen of them are female. One participant serves in kindergarten, two participants serve in private schools, two participants serve in primary school, three participants serve in vocational high school, five participants serve in secondary school and eight participants serve in Anatolian high school. While three of the teachers have master’s degree, eighteen of them have bachelor's degree. One of the schools is located in a village, seven schools are located in the district, and thirteen of them are located in the central district. One of these schools has low, fourteen schools have middle and three of the schools have high socioeconomic status.

Table 1. Information About the Participants

Participant	Gender	Sen.	School Type	Ed. Lev	Sch.Loc	S.E.Level
M1	Male	10	Secondary	Bachelor	District	Middle
M2	Male	6	Secondary	Bachelor	District	Middle
M3	Male	14	Primary	Bachelor	Central District	High
M4	Male	16	Vocational H.S	Bachelor	District	Low
M5	Male	19	Secondary	Bachelor	Central District	Low
M6	Male	25	Anatolian H.S	Bachelor	Central District	Middle
M7	Male	15	Anatolian H.S	Bachelor	Central District	Middle
M8	Male	25	Anatolian H.S	Bachelor	Central District	Middle
F1	Female	10	Primary	Bachelor	District	Middle
F2	Female	14	Vocational H.S	Bachelor	District	Middle
F3	Female	7	Secondary	Postgraduate	District	High
F4	Female	19	Kindergarten	Bachelor	Central District	Middle
F5	Female	20	Vocational H.S	Bachelor	District	Low
F6	Female	17	Special Education	Bachelor	Central District	Middle
F7	Female	17	Special Education	Bachelor	Central District	Low
F8	Female	26	Anadolu Lisesi	Bachelor	Central District	Middle
F9	Female	16	Anatolian H.S	Postgraduate	Central District	High
F10	Female	28	Anatolian H.S	Bachelor	Central District	Middle
F11	Female	9	Anatolian H.S	Bachelor	Central District	Middle
F12	Female	15	Anatolian H.S	Bachelor	Central District	Middle

DATA COLLECTION

Research data were collected through semi-structured interview form. The following steps were used for the preparation of the interview form: The questions were determined by the researchers, taking into account the purpose and sub-purposes of the study. In the next stage, the semi-structured interview form was sent to expert for opinion, together with the purpose and sub-objectives of the research. A pilot interview was conducted with three participants using the form prepared in line with the feedback received. As a result of the interviews, new questions were added to the questionnaire and the form was made ready for application. Interview question examples (1- What kind of learning resources do you use in the context of professional development? 1-a) ... 2- Why do you need professional learning? What is the driving force for professional learning?). The place and time of the interview were determined by contacting with the teachers who had volunteered to participate in research. Teachers were informed about the professional learning and the aim of the research before the interview. It was stated that the recorder would be used upon teachers’ permission and a privacy statement was signed respecting the privacy of teachers’ names and voice records by the teachers who had given permission. All of the teachers allowed voice recorders to be utilized. At the end of these processes, interviews, which lasted between 30-45 minutes, were conducted.

DATA ANALYSIS

The sound recordings obtained as a result of the research were transformed into written text. Content analysis method, one of the most-used methods among qualitative research methods (Özdemir, 2010), was used during the reporting process of the transcribed data. In content analysis method, researchers create the themes (Silverman, 2014) and related codes (Merriam, 2013) which are determined either during the

research process or before the research in line with the literature. The themes in this research were created during the analysis process. In the first stage, coding was done by reading the data. In the second stage, themes were created by bringing together the related codes. In the third stage, selective reading was done in order to reveal new codes that might be related to the themes. In the last stage, a consensus was reached by evaluating the codes and themes created by the researchers. Three themes were created as a result of the data analysis. These are informal learning resources, learning motivation and learning barriers. Sub-themes related to these themes were created and associated with the codes, and these structures were visualized and presented in the findings section.

VALIDITY AND RELIABILITY

In qualitative research, validity is the accuracy of research results and reliability is the repeatability of these results (Yıldırım & Şimşek, 2011). Participant control, triangulation, longitudinal observation in the field, rich and intense description, peer review and external control are the validity methods (Creswell & Miller, 2000), at least two of which are suggested to be used in qualitative research (Creswell, 2007). In the current study, peer review and participant control methods were used. Participant control is considered as a crucial method for the reliability of research (Lincoln & Guba, 1985). Primarily, research data and results for peer review were shared online with a specialist in the field. Following the online meeting, final checks were completed. Thereafter 10 people were chosen to be interviewed again. The acquired codes, subthemes and themes as a consequence of the analyses and peer review were shared during these interviews. The results were ensured to be checked by participants as well. To provide the reliability, the data were sent to the specialist who was initially not included in the research and subsequently asked for content analysis. The obtained results were compared with each other and the compatibility percentage between two codings was calculated as 88%. According to Miles, Huberman and Saldana (2014), the compatibility percentage between encoders is expected to be at least 85-90%. According to the conducted processes for validity and reliability, the research results can be suggested to be both valid and reliable.

FINDINGS

In this research, codes, themes and subthemes about teachers' informal learning resources, their motivation and the barriers to learning process were determined as a result of the conducted interviews with participants.

TEACHERS' INFORMAL LEARNING RESOURCES

With regard to teachers' informal learning resources, two themes were determined as interactive and personal resources. Interactive resources are the sources in which teachers either assume active roles or rather become the ones receiving more information while not being fully active. Personal resources might be perceived as practices actualized by teachers' themselves and through which they gain access to information in different ways, receiving knowledge without being involved in any interaction. The theme, subtheme and codes are shown in Figure 1.

Interactive resource theme consists of two subthemes as active and passive ones. Teachers sometimes enter in a process of active-passive learnings by observing. In this process, teachers observe experienced teachers and also obtain information from their managers and advisers. This issue was expressed by M3 as "... I have benefited a lot from experienced teachers. I have observed their relationships with students and other teachers in the school. From time to time, I have asked about their experiences in teaching. All of these experiences have contributed a lot to my professional learning." F5, on the other hand, talked of her interaction with her adviser teacher as "My adviser teacher was so good in the first school where I did my first internship. His/her (unspecified) relationship with students was so good and intimate. I learnt a lot from my adviser" Some of the teachers see especially their principals whom they get along with to be information sources. On this issue, F4 stated that "when you are close with school management, you can get information about school management. I want to be a school administrator in the future and I think the information I obtain from principals will be of help when I become an administrator." Teachers are also involved in active interaction and learn through mutual collaboration with their colleagues. Other sources through which teachers obtain information interactively are students and parents. Especially those who serve in regions far away from their cultures enter in a mutual learning process with their students. F3 stated on this issue that "I used none of the knowledge I was taught at university. I was designated in the city of

..... there was nobody who could speak Turkish properly. I tried to communicate with students. I was teaching mathematics while they were teaching me the language.”

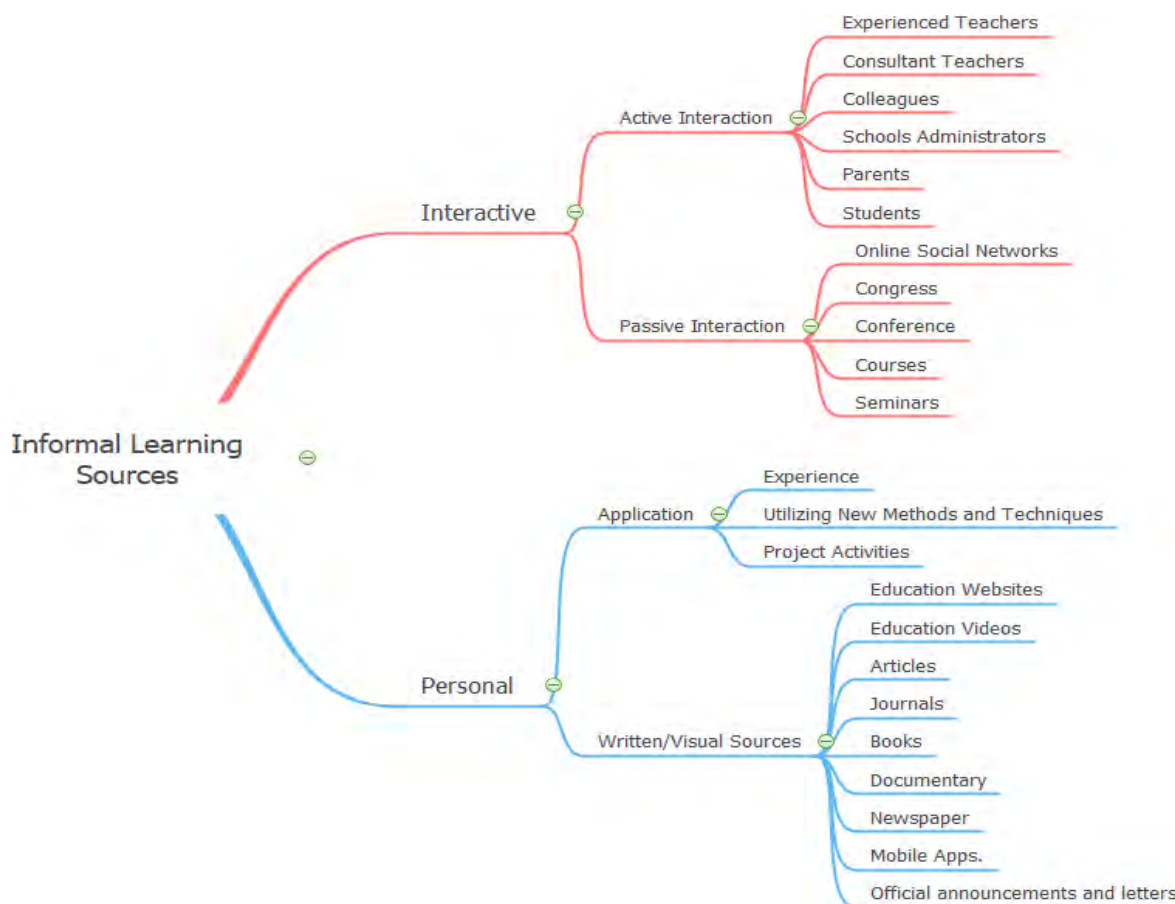


Figure 1. Informal learning sources of teachers

Teachers widely use online social networks as passive informal learning resources. M7 is a teacher using the online social networks and the internet as informal learning resources. He stated that “I try to bring my colleagues’ applications shared on social networks and the internet in the school. I participate in online courses that can improve me.” Moreover, M4 indicated that he uses social media as a learning source by saying that “I use Twitter. I follow the various accounts for the latest improvements in education through social media.” Likewise, F2 remarked that learning sources have been diversified for teachers by saying “I use education groups and social networks. Information sources have changed. We do not necessarily need formal education to get information about something anymore.” Congresses, courses, conferences and seminars are also teachers’ informal learning resources. According to most of the participants, these activities are of informal learning resources. Several participants shared their experiences about these sources. M4 said that “I attended an educational coaching course. It was so beneficial”; M5 remarked as “I improve myself through various courses. I took a family counselling course. Beside this, I participate in conferences and seminars relating to my field.”; F1 also stated that “I attend the courses that draw my attention. I also try to participate in congresses relating to my field.”

Teachers’ informal learning resources consist of two subthemes as application and written/visual sources. Experience consists of activities in which teachers take a part in person. Teachers’ learning which takes place during their serving in the profession might be considered in this context. On this issue, F3 said that she learnt new information during her professional practices: “.... There were not experienced teachers to guide me. I learnt everything by practising. In this context, information taught at universities is limited as well. The information ‘taught’ by instructors who have not experience in the field is not effective.” Teachers also contribute to their professional learnings by utilizing new methods and techniques during teaching. F2 stated that she experiences a learning process by testing the usefulness of applications about which she has heard on the social media and observing the reactions given by her students. Another personal learning source illustrated in teachers’ application theme is the project activities. It is possible to say that teachers have the opportunity to acquire information in project activities by practising. F7, who sees project activities

as a personal learning source, addressed the importance of project activities by saying that “I have taken part in several projects. You come together with teachers from different schools and even countries in these projects. Therefore, it brings about an environment where there is information exchange and this information is put into practice. These facts have contributed a lot to me professionally.”

It is possible to suggest that teachers often make use of written and visual materials as personal learning resources. When the acquired key codes were analyzed, most codes were grouped under this theme. Some of the participants indicated their personal learning resources. For instance F11 said that “I read a book and follow education-related websites.”; F9 also stated that “I watch educational videos. The videos by master scholars in the field of education are of great help. I also like watching documentaries. I think documentaries are one of the sources that should be followed as well.” Likewise, M2 said that “...there are mobile applications. I download and use them actively.”

TEACHERS’ LEARNING MOTIVATION

Teachers’ learning motivation was observed under two themes as intrinsic and extrinsic motivation. The self-determination theory put forward by Ryan and Deci (2000) was used to determine the themes in teachers’ learning motivation. The codes and themes with regard to teachers’ learning motivation were illustrated in Figure 2.

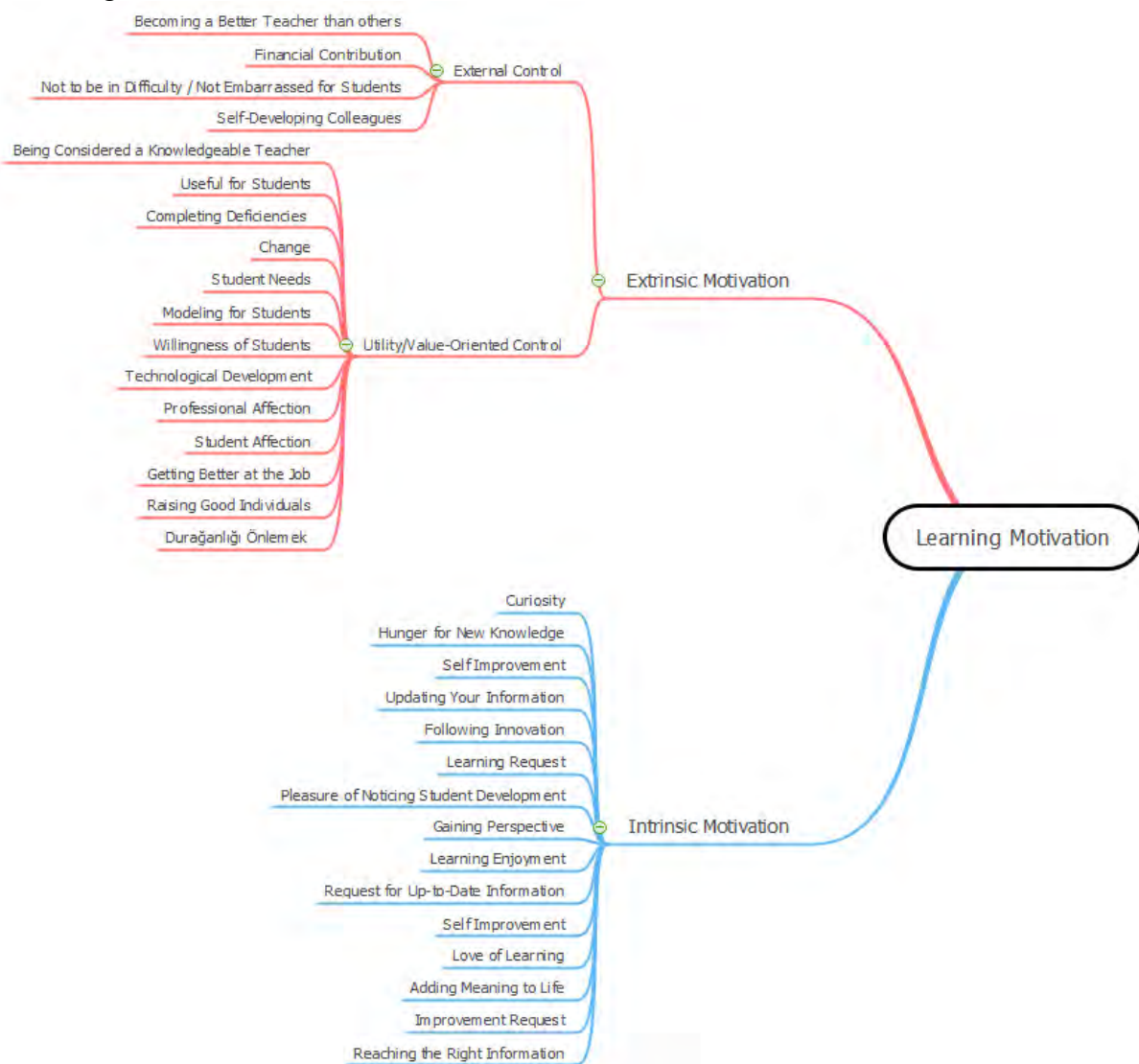


Figure 2. Teachers Learning Motivation

Teachers’ extrinsic motivation elements consist of two subthemes as external control and utility/value-oriented control. External control refers to situations in which reward or punishment are seen as motivational elements. In this theme, it might be suggested that teachers are motivated for learning to receive the reward or avoid punishment. M1 remarked that it is a source of extrinsic motivation to be one step ahead from other teachers: “... Being one step ahead from the others motivates people. It also

encourages me to learn...” The pleasure caused by the sense of being ahead can be said to be a sort of award for teachers. F4 expressed her opinion by saying that “I always improve myself. The courses I have taken also contribute to me financially in return. For instance, I took a training of trainers certification in the field of internet-based content development. I served in in-service trainings as an instructor thanks to this certification.” Teachers’ another learning motivation is not being embarrassed in front of their students. F11, who is of this opinion, said that “My students are so curious. They always ask questions. I am scared of being embarrassed if I cannot answer them.” Teachers also gain learning motivation when they are together with other self-improving teachers. F1 expressed her feelings by saying that “... I see teachers improving themselves professionally and I do not want to fall behind because the difference between improving teachers and not improving ones is so clear.”

Another subtheme under the extrinsic motivation theme is utility/value-oriented control. In the utility/value-oriented control theme, social honor is of concern rather than reward or punishment. Teachers are eager for professional learning to be seen knowledgeable and better in their profession. Teachers also want professional learning to hinder monotony. M3, who said that “Feedbacks that I receive from my students motivate me. We have an experienced teacher whose feedbacks also motivate me.” and another teacher F4, who stated that “I want to be better in my profession. Monotony is not for me. Thus, I attend the trainings and learn new information.”, clarified these assumptions. Another motivation source accentuated under this subtheme is the changes taking place in the world and knowledge acquisition methods. On this issue, F10 addressed the motivation brought by changes in the world: “Having access to knowledge is so easy now. The world changes fast and I try to improve myself for not being behind my time.” F13, whose motivation source is also change, stressed the speed of changes by saying that: “The changes take place fast in my profession. There always appear new programs and requirements. Therefore, I must keep up with these changes.”

Internal factors which are the source of motivations for professional development were also often mentioned by teachers. There are fifteen different codes located under the theme of intrinsic motivation sources. These codes can be seen as factors motivating the teachers internally with regard to requirements of the profession. Teachers are motivated to learn for different reasons such as thirst and curiosity for knowledge or refreshing their knowledge. On this assumption, M1 said that learning new information motivates him: “ ...I also like learning new information. Refreshing the knowledge helps people professionally keep up to date. Both my learning and teaching motivation increases.” Some of the teachers, on the other hand, enjoy the changes that come in sight in students thanks to their acquired knowledge. Regarding this issue, F2 said that “... Seeing that students learn something new motivates me.” Likewise, F5 addressed how this delight arisen from teaching motivates her “I love my students so much. Seeing the changes taking place in them gives me pleasure.”

BARRIERS TO LEARNING

Barriers to teachers’ learning were grouped under four themes based on teachers’ opinions. These are personal, school-related, job-related and central policies-related barriers. However, some teachers said that there is not any barrier to learning. The codes and themes with respect to the barriers to learning are illustrated in Figure 3.

As it is shown in Figure 3, some key codes are located under more than one theme. For instance, workload may seem related to the profession and central policies. This is because teaching not only requires itself to be done in the class but also involves a preparation process for lesson out of working hours. Therefore, workload is an barrier caused by the job itself. At the same time, extra duties such as being a hall monitor, training courses, and assignments given for national holidays are all duties given as a result of central policies. So, workload can be said to be related with central policies as well.

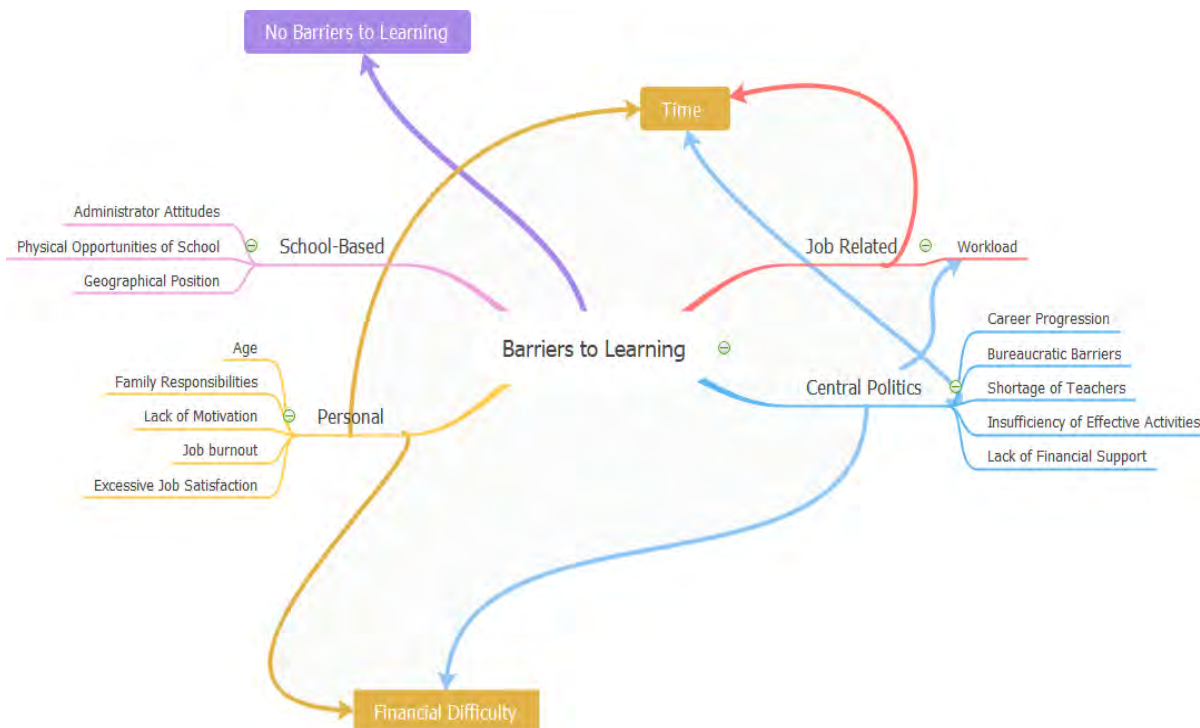


Figure 3. Barriers to Learning

Analyzing personal barriers to learning, some barriers such as age, family responsibilities, job burnout, lack of motivation and excessive job satisfaction come to the forefront. The barriers caused by central policies are career progression, bureaucratic barriers, shortage of teachers, insufficiency of effective activities and lack of financial support. Whereas workload is a job-related barrier, administrators’ attitudes, physical opportunities and geographical position of school are school-related barriers. Workload has also been taken as an barrier caused by central policies in this research. Financial difficulty is an barrier caused by both personal and central policies. M3’s opinion on this issue is “Lack of time, workload and working hours are the biggest barriers. I come home from school, I get prepared for tomorrow’s lesson. I also look after my children in the house. The time flies by in the meantime. I hardly find time to rest. Therefore, it is so hard to find time for improving myself. When it comes to weekends, there is a course in the school. I dedicate Sundays to my family.” Having analyzed M3’s opinions on the issue, some of the factors such as workload, time, family responsibilities and extra duties seem to be the personal barriers to learning. M8 also said that “... I am experiencing job burnout. I am getting old. If I were younger, I would pursue a master’s degree. But I think I am late for this kind of things now.” F2 also expressed herself in a broader perspective saying that “I cannot make time for myself. You must allocate time for the family at night. Since I am the only teacher in my branch at the school, I cannot take part in activities because it is so hard to get permission. I want to participate in congresses but I can’t afford to go to other cities and pay participation fees. Even though we overcome these problems, school principal objects to us by emphasizing teacher shortage in the school.”. F3 added her opinion by saying that “... Full-time schooling limits us in terms of time. Moreover, there are not effective activities organized on a local basis for us. We apply to central courses but end up being refused. There are paid courses but it is hard to maintain consistency under these financial conditions. If I had an opportunity, I would prefer to go to different countries, observe their education systems and schools but I cannot find that chance”. F6, who elaborated her opinions, stated that “If there was a room devoted to teachers’ learning, I could plan and carry out my professional development. For instance, since it is tiring and takes time, we cannot go to our houses at break times. It is impossible to do something in the teachers’ room because it is full of noise and people. Therefore, it would be great if we had a room devoted to, if not personal, a few teachers. Yet, it is impossible to possess this kind of chance with the possible physical conditions of school. Furthermore, teachers who have improved themselves and are more beneficial to students, might be provided with financial support. The financial aid might be given for courses that are necessary for teachers’ trainings. Since we are destitute of these chances, our professional development remains in the background.”

DISCUSSION, CONCLUSION AND SUGGESTIONS

It has become both a necessity and an obligation for teachers to go on learning in the context of their professional development throughout their careers. As a matter of fact, while the changes in teacher-student roles in knowledge and technology require teachers to acquire new knowledge and skills, teachers' professional learning is considered an important factor for student and school success. Professional learning can take place in formal and informal ways. Informal learning process is an important tool for professional development as it is a process initiated by teachers in line with their interests and needs. In this context, the current study aimed to determine teachers' informal learning sources, barriers (barriers) to professional learning, and teachers' professional learning motivation based on teachers' opinions.

As a result of the research, teachers' informal learning resources were gathered under two sub-themes as interactive and individual learning resources. Interactive learning resources are divided into two categories, depending on their intensive interaction with their colleagues or other education stakeholders as well as their active participation in the process. These are active interaction and passive interaction. Experienced teachers, counselors, colleagues, school administrators, parents and students are informal learning resources teachers actively interact with. In this process, teachers learn actively by sharing information, discussing various issues, acting together in solving problems, or by transforming the communication process with parents, students and school administrators into a learning process. The other category is passive interactive informal learning resources, which are online social networks, congresses, conferences, courses, and seminars. Passive interactive learning resources are learning resources where there is limited interaction with other colleagues, and teachers generally assume the role of receiving information. Another theme, individual learning resources, refers to the learning resources where there is no interaction in the learning process, teachers directly apply to information resources or they learn by doing and experiencing. This theme is divided into two categories as written and visual materials and practicing. While teachers' finding out useful and practical methods constitutes important learning resources, applying new methods in the classroom, writing projects, and taking part in projects are practical informal learning resources.

There are different classifications for teachers' informal learning resources in the literature. While Lohman and Woolf (2001) discussed learning resources in the form of information exchange, experimentation, and environmental scanning, Kwakman (2003) discussed them as reading, experimenting, reflection, and collaboration. In the current study, a classification has been made by taking interaction as the focus. In the studies on the reflection of teachers' different learning activities on classroom practices and its effect on student achievement (Akiba, 2012; Appova & Arbaugh, 2018; Camburn & Han, 2017), collaborative and interactive learning activities were found to be more effective than other learning resources. In addition, it can be suggested that teachers who value interaction with their colleagues and turn this into a learning resource will be highly likely to make reflective practices. According to the TALIS 2018 results, teachers attend face-to-face courses and seminars, read the professional literature, and participate in the training conferences more despite the positive impacts of interaction-based learning resources on teaching practices. These activities are learning resources that offer teachers limited or no interaction at all. There are studies reporting that especially activities in the form of courses, seminars, and conferences are ineffective and are not put into practice (Sıcak & Parmaksız, 2016; Uçar & İpek, 2006). It can be suggested that such activities with a one-way flow of information trigger a temporary motivation for teachers, but are not effective in transferring new professional knowledge to classroom practices. Although the research did not focus on the frequency of use of learning resources, the fact that the participant teachers did not mention interactive informal learning resources such as coaching, common classroom observations, and research-based learning point out these resources are not used much.

Another finding of the study is related to teachers' professional learning motivation. Teachers' professional learning motivation was discussed and classified within the framework of self-determination theory put forward by Ryan and Deci (2000). In this context, two themes were created as internal motivation and external motivation. Teachers' desire to learn, curiosity, love of learning, updating their knowledge, and self-actualization, and their orientation towards professional learning due to the fact that they take pleasure from learning itself are their internal motivation sources. Teachers' external motivation sources are divided into two sub-themes as external control and benefit/value-oriented control. Teachers may turn to informal professional learning in order to get various rewards or avoid punishment. These resources are brought

together under the external control sub-theme. In addition, teachers might tend to learn in order to be beneficial to individuals, due to professional love and professional values. In this context, the factors such as raising good individuals, being a good role model for students, completing the deficiencies, love of profession and students are sources of motivation considered under the benefit / value-oriented control sub-theme. Previous studies also found that love of learning, professional commitment and self-development were important sources of intrinsic motivation for teachers (Lohman, 2005). Uştu et al. (2016) found that the most important factors motivating teachers to maintain their professional development are the sense of conscience and their students. In the current study, it can be said that professional values and love of students stand out as motivation sources within the benefit / value-oriented control sub-theme. Scribner (1999) considered the lack of knowledge and skills of teachers as sources of intrinsic motivation in his study and addressed financial gains as an extrinsic motivation factor. The results of our research have expanded the intrinsic and extrinsic motivation sources by addressing professional learning motivation within the framework of self-determination theory.

What makes informal learning more valuable than formal learning is that it begins instinctively and the individual is driven by intrinsic motivation. Thus, teachers start the learning process and take on the responsibility of learning by managing time under their own control until they achieve their aims. As a matter of fact, Özkan and Anıl (2014), in their study using TALIS 2008 data, concluded that teachers' voluntary participation in professional development activities in line with their needs and the time allocated for professional development categorized countries largely correctly in terms of their success. Besides, related studies in the literature revealed that there are significant relationships between teachers with different motivation profiles and their participation in professional development practices. In this context, Jansen et al. (2014) found that teachers with high intrinsic motivation and integrated regulation levels spend more time for professional development. As a result, teachers' professional learning motivation may arise from different sources. This study has also found that teachers generally lay emphasis on intrinsic motivation sources; however, it can be suggested that regulations to be made in the school structure and in central policies in accordance with the external motivation sources can encourage teachers to maintain professional learning.

Another finding of the study is about the barriers to teachers' professional learning. As a result of the research, it has been found that these barriers stem from school, individuals, profession and the central policies. In teachers' opinions, the geographical location and physical conditions of the school and the attitudes of the administrators are the barriers to learning. In this study, it has been found that age, low motivation, family burden, burnout and occupational satisfaction are individual barriers to professional learning, while workload has been found to be due to the characteristics of the profession. Finally, it has been concluded that lack of career progression, bureaucratic attitudes, shortage of academic staff at school, lack of qualified professional development activities and lack of financial incentives are barriers stemming from central policies. The time barrier is associated with both categories as it is related to both individual and professional characteristics, while financial insufficiency is associated with central policies and individual barriers. Domestic and international studies also support our research findings. Physical conditions were found to be one of the biggest barriers to teachers' professional learning in the study conducted by Özgenel (2019), whereas Opfer and Pedder (2011) found that the structures and support in the school affected teachers' learning. Bigsby & Firestone (2017) stated that time constraint and personal factors as well as material and social incentives were barriers to teachers' learning, while Kedzior and Fifield (2004) reported that the structure of professional development activities, time constraint, the content of professional development, school and region factors were the barriers to professional learning. Furthermore, the professional development barriers of teachers were found to emerge as legal regulations, education policy, administrators' attitudes, working conditions, low motivation, burnout, economic problems, professional status and political effects in a comprehensive study carried out by Can (2019); however, Yurdakul (2008) pointed out that burnout and teachers' point of view to professional development, particularly in experienced teachers, are the biggest barriers to professional learning.

According to TALIS report (2018) published by OECD (2019), the lack of incentives for professional development, professional development activities' overlapping with school hours and lack of support by the school management are the most common barriers to teachers' learning expressed by teachers in Turkey. Although these results provide supporting evidence for our research finding in that context, professional

development barriers can be suggested to be the main reason for the lack of motivation for professional learning in teachers.

Based on the research results, some inferences concerning the school structure and central policies that will support teachers' professional learning have been made; first, it has been determined that teachers use different sources for professional learning, which may be due to teachers' learning styles and inclinations. However, the effect of collaborative learning based on interactivity on both learning and transferring learning into practice is well known. In addition, when the time constraint, work burden and family-related barriers taken together, it can be suggested that practices that will allow teachers to interact at school will be an important resource for teachers' learning. In this context, school principals encouraging coaching and mentoring practices, classroom observations, group work, joint projects and action research can support teachers' professional learning. In addition, providing access to these resources (books, magazines, internet, educational portals, and etc.) can be supported centrally for teachers who prefer various learning methods. Second, although financial incentives are a source of motivation for teachers, lack of career advancement and lack of incentives can also be a barrier to professional learning. Within this framework, teachers' professional development can be associated with career advancement, and legal arrangements can be made in personal rights and financial incentives for professional development. Third, time constraint, work and family burden, lack of executive support, centralized policies and low motivation are major barriers to professional learning. In this context, turning the school into a learning environment for teachers can be a solution to overcome the barriers like time, work and family burden, which points to the support of administrators and a collaborative school culture. Finally, bureaucratic barriers such as 'written permit' that prevent teachers from participating in professional learning activities can be rearranged, and central courses and seminars can be organized as practice-weighted and interaction-oriented.

LIMITATIONS

However, the study has meaningful results about teachers' learning resource, we can talk about some limitations. since a qualitative approach has been adopted in this research, teachers' professional learning resources are limited to the learning resources specified by the participants. These findings are limited as the study primarily focused on teachers' learning resource and did not explore how often these learning resources are used and to what extent the information acquired from these sources is transferred into the classroom environment. Finally, the lack of findings regarding the effects of teachers' informal learning on students and school success is another limitation of this study. In this context, further studies should be conducted both qualitatively and quantitatively to research to what extent teachers transfer professional learning to the classroom, how often they use these sources, and the effect of teachers' learning on students and school success.

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