ANALYSIS OF A TEACHER'S ONLINE TEACHING MATERIAL PLANNING AND DEVELOPMENT PROCESSES: ENGLISH LESSON EXAMPLE[1]

BİR ÖĞRETMENİN ÇEVRİMİÇİ ÖĞRETİM MATERYALİ PLANLAMA VE GELİŞTİRME SÜREÇLERİNİN İNCELENMESİ: İNGİLİZCE DERSİ ÖRNEĞİ

Betül ULUUYSAL[2] A. Aşkım KURT[3]

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Abstract: The aim of the research is to examine the process of developing materials for the ninth-grade English curriculum and the use of the developed materials in the teaching-learning process by an English teacher through online environments.The data collection process was applied based on the Technology Integration Planning Model, which was selected on a theoretical basis. Data of this study consists of video recordings of teaching in the online environment and the online teaching material development process, as well as a researcher's diary and a teacher's diary, a semi-structured interview form, and audio recordings. The collected qualitative data were analyzed using the content analysis method. At the end of the study, the teacher had shown development in both technological competence and their academic field. During the research period, there were some technical and connectivity problems experienced, and it was observed that the teacher showed development in finding solutions to resolve these issues. The research found occupational development activities to be more successful when desire, requirement, expectation and readiness of individual learners were considered. The findings of this study include designing occupational development activities for teacher properties, opportunities and requirements that contribute to teacher motivation and efficiency.

Keywords: *Professional development, foreign language teaching, online environments*

Özet: Araştırmanın amacı, bir İngilizce öğretmeni tarafından çevrimiçi ortamlar aracılığıyla 9. sınıfın bir dönemlik İngilizce öğretim programına yönelik materyallerin geliştirilmesi sürecinin ve geliştirilen materyallerin öğretme–öğrenme sürecinde kullanılma durumlarının incelenmesidir.Çalışmada kuramsal temel olarak seçilen Teknoloji Entegrasyonunu Planlama Modeli aşamaları doğrultusunda veri toplama süreci gerçekleştirilmiştir.Araştırmanın verileri çevrimiçi ortam öğretimi ve çevrimiçi öğretim materyali geliştirme süreçlerinin video kayıtları, araştırmacı ve öğretmen günlükleri, öğretmen yazılı görüşme formları, yarı-yapılandırılmış görüşme formu ve ses kayıtlarından oluşmaktadır. Toplanan nitel veriler içerik analizi yöntemi kullanılarak analiz edilmiştir. Öğretmen araştırma sonucunda hem teknoloji yeterliği açısından hem de akademik alanda gelişim göstermiştir. Araştırma süreci boyunca teknik aksaklıklar ve bağlantı sorunları olmuş, öğretmenin bu sorunlara çözüm bulma konusunda da gelişim gösterdiği gözlenmiştir. Araştırmada, mesleki gelişim etkinliklerinin bireyin istek, gereksinim, beklenti ve hazırbulunuşluğu göz önünde bulundurulduğunda daha başarılı olduğu sonucuna ulaşılmıştır. Mesleki gelişim etkinliklerinin öğretmen özelliklerine, olanaklarına ve gereksinimlerine göre tasarlanmalarının öğretmenin motivasyon ve verimliliğine katkısı bulunduğu da ulaşılan sonuçlardandır.

Anahtar Sözcükler: *Mesleki gelişim, yabancı dil öğretimi, çevrimiçi ortamlar*

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[2] Dr., MoNE, betul_uluuysal@hotmail.com, /orcid.org/0000-0003-4145-7544
[3] Prof.Dr., Anadolu University, aakurt@anadolu.edu.tr, /orcid.org/0000-0003-1084-5579

Introduction

Today, information is the primary driving power that guides society at every stage of life (Dignum, 2021). How to educate people that are expected to form today's information societies has been widely discussed in the academic literature (Sayaf et al, 2021; Shaturaev, 2021; Szymkowiak et al, 2021). The required competences of individuals have increased in line with the development of technology, therefore, education's role in this area becomes ever more important. In accessing information beyond the classroom environment, various tools are utilized in order to access information compared to the past, and access without time and space constraints has fundamentally changed teachers' and students' roles and thereby transformed today's education. There has been transformation from the standardization of classes and mass education to more individualized, individual requirement-based and skill-oriented education (Demina et al, 2020; Movchun et al, 2021; Şişman, 2006). Therefore, schools and teachers that guide students should provide understanding, analyzing, problem solving, information generating and sharing skills rather than simply the transference of information (Parlar, 2012).

It is stated in the literature that teachers can interpret changes in information and communication technologies that guide education policies around the world, and also in Turkey, through occupational development (Elçiçek ve Yaşar, 2016; Odabaşı, 2009; Şahin, 2008). Additionally, when the literature from Turkey's Ministry of National Education (MoNE) on occupational development applications and activities were analyzed, it was found that these activities were applied as mandatory rather than as a tool used in order to meet requirements, and it also was found that participants reported negative opinions about the training they had attended (Bümen, 2009; Eroğlu & Özbek, 2020; Özoğlu, 2010; Yurtsever, 2013). Sıcak and Parmaksız (2016) analyzed teachers' views following their participation to in-service training activities, and stated that the teachers found these activities to be theoretical and boring, and that the timing of these events were inappropriate and that they experienced low levels of motivation. Studies that have analyzed in-service training activities have included certain recommendations for practice. Some of the recommendations presented by these studies were giving in-service training by field experts, improving university-school cooperation, including activities from real life, with content that meets teachers' requirements and based on application. It seems important that models formed for occupational development should consider in-service training application or

participant views, recommendations and needs and in-service training understanding and application should be organized (Ekşi, 2010; Kaya, 2020).

When current opportunities provided by the Internet and especially Web 2.0 technologies for teachers are considered, it is seen that using such technologies within the teaching environment can benefit both students and teachers (An et al., 2010; Luo, 2013; Medic & Xiaohui, 2021; Orhan Göksün et al., 2018; Palaigeorgiou & Grammatikopoulou, 2016; Perikos et al., 2015; Yunus et al., 2012). Innovations introduced by Web 2.0 technologies transformed Internet technology from stable, reflective tasks into an environment where teachers' and students' can synchronously interact. Furthermore, it can be seen that this change with the Internet has resulted in adding "pedagogy 2.0" and "e-learning 2.0" topics to the literature, by referring to Web 2.0 technologies and the reshaping of teaching theories and strategies as well as the teaching environment, and the definitions of both teacher and learner (McLoughlin & Lee, 2007).

Although Web 2.0 technologies have the potential to be used within the teaching environment, there are studies that have shown these tools are insufficiently adopted by teachers, and that rather than knowledge accumulation and educational activities, these tools are predominantly used for entertainment and communication purposes (İşman et al., 2007; Somyürek & Karabulut Çoşkun, 2013; Tonbuloğlu & İşman, 2014).

When opportunities provided by Internet technologies are considered, it could be stated that language teaching has the easiest form from past to present. It can be seen that interaction, sharing, and multimedia support offered by Web 2.0 technologies are properties that foreign language learners and teachers can readily utilize; however, in practice, these tools are insufficiently used and there is a need to raise teachers' awareness on this subject (Elmas & Geban, 2012; İşman et al., 2007). Additionally, in various studies, students have used Web 2.0 tools and online environments to complete activities; however, teachers have mostly been found to use these environments ineffectively (Altın & Kalelioğlu, 2015; Dağ, 2016). Therefore, in-service teaching activities seem to be required by teachers more frequently in terms of their utilization of Web 2.0 and online environments in their teaching. For this purpose, the current study analyzed the processes completed by a teacher preparing teaching material for an online environment who previously had not used Web 2.0 and an online environment in the class environment.

The focus of the study is the analysis of an English teacher's material development process for the ninth-grade English language curriculum in Turkey by using online environments.

Technology Integration Planning Model

Since the problem situation of the study is how an English teacher's online teaching material planning and development processes for a one-semester course content are carried out, in other words, a description of a technology integration process, a model that focuses on planning technology integration was chosen. "Technology Integration Planning Model", which explains the planning stages of the technology integration process of Roblyer (2006), has been a guide about what the steps to be taken in the research should be. Technology Integration Planning Model, unlike many other models, includes planning the process step by step rather than showing the level of the integration process. Similarly, it aims to plan the integration process by giving the same importance to all variables such as student learning, infrastructure and individual differences that integration models focus on. Since a teacher's technology integration process was discussed in detail in the research, it was deemed necessary to describe the process in a holistic way rather than focusing on a single element in the whole process. The Technology Integration Planning Model plans the process in five steps, and these steps are to provide evidence about the benefits of the technology to be used, the goals of the integration process and how to evaluate the achievements of these goals, which teaching strategies and activities to use, providing the necessary hardware and software resources, and It was stated as the evaluation of the integration process as the last step. It was emphasized that elements such as trained personnel, access to necessary hardware and software resources, choosing the right strategies, and technical assistance help the process for an effective integration process (Mazman & Usluel, 2011).

The stages of this integration model, which was chosen as the theoretical basis in the study, were planned and applied as included in the model. Accordingly, the steps implemented within the framework of the Technology Integration Planning Model in the study were carried out as shown in Figure 1.

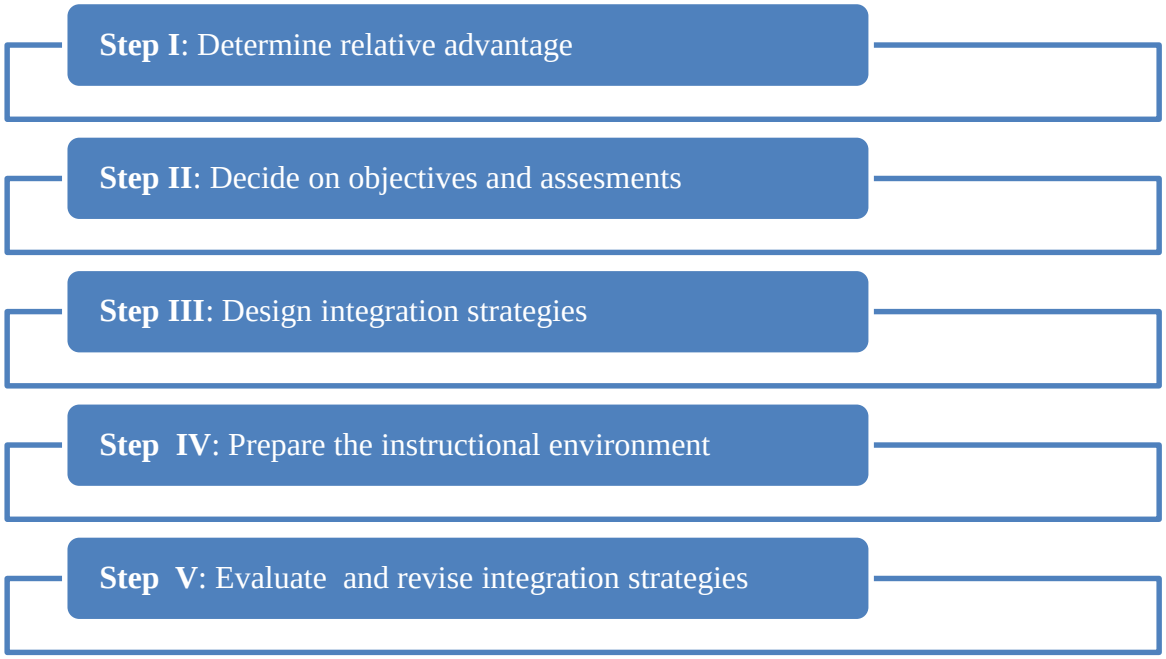

Figure 1

Five study stages based on the Technology Integration Planning Model (adapted from Roblyer, 2006)

Method

Research Design

The purpose of the study was to describe the online teaching material development process of an English teacher in Turkey. The selected research model for the analysis of teaching the online environment to the teacher by the researcher, and for the teacher's material development process within an online environment was design-based research. Wang and Hannafin (2005) defined design-based research as systematic and flexible processes where the analysis, design, development and application process can be repeated as many times as deemed necessary. The Design Based Research Collective (2003) expressed that successful design-based studies analyze single events over a long period of time.

Similarly, the current study considered a teacher's online environment learning and online teaching material development process over a prolonged period. Additionally, the teacher and the researcher collaborated throughout the study. Problems experienced within the initial study were then repeated within the solution process where the researcher and teacher worked together to

develop and apply an improved design. The developed materials were voluntarily analyzed by two 10th grade students selected by the teacher and the researcher's thesis committee members, and reorganized by the teacher based on their collective feedback.

Study environment

Online environment teaching and online teaching material development stages of the researcher were applied to three different environments including the school's infirmary and language classroom at the teacher's high school, as well as at the teacher's house during the summer. The environment and time selection were based on the teacher's choice and availability, but were not optimal. However, within the available circumstances, the best environment and time were considered for the teacher. Similarly, time selection for the teaching were left to the teacher and free classes at the teacher's school were selected as the online teaching hours.

In this study, various online environments were selected for the teacher to create teaching material, with the purpose of the teacher designing and using her own teaching materials within an online environment. During the selection of online environments, a pre-interview was held with the teacher. In this interview, the learning outcomes in the ninth-grade curriculum were examined and the online features of the teaching materials to be prepared for these outcomes were noted by the researcher, taking into account the preferences of the teacher.The researcher made selections from online environments that were free of charge and were not blocked by the MoNE, in accordance with the characteristics specified by the teacher. The researcher finalized her choices with the opinions of the field experts in the Thesis Monitoring Committee. Accordingly, Toondoo for images, GoAnimate for videos, Voki for the preparation of speaking characters, Prezi for the preparation of online presentations, FamilyEcho for the preparation of family tree/concept maps, Google Doc for the preparation of online documents and QuizStar4Teachers for evaluation activities were chosen for the learning outcomes. In the selection process, it was taken into account that each environment has different multimedia features, that it contains features that will attract the attention of students, and that it is suitable for the content of the learning outcomes.For example; FamilyEcho online environment took place in accordance with the learning outcomes of creating a family tree and learning about its members in the curriculum. Or, Google Documents online environment has been added in order to be suitable for the CV preparation outcome and also for students to prepare and share their

CVs in the classroom. According to the teacher, the Voki environment for speaking skills, which is the area that students need the most, was added to the research, and it was aimed to contribute to both writing and speaking skills of the students.

For online environments suited to the participant teacher creating teaching materials for English lesson content and to support language learning, the researcher analyzed what was available, and proposed a solution for approval from the thesis committee and advisor. Based on the feedback received, the online environments were selected to include; a) visual/comic preparation environment, b) online presentation preparation environment, c) assessment material preparation environment, d) audio character preparation environment, e.) animation video preparation environment, f) online document preparation environment, and g) family tree/concept map preparation environment.

Participants

The participants of the study during the data collection process were the teacher and the researcher. The teacher was an English language teacher in Turkey who had been employed at various MoNE schools over the preceding 12-year period, and had worked in a high school in Eskişehir center for the previous 5 years. The high school had an interactive whiteboard installed as part of the FATİH project (Turkish government project delivering technology to K-12 classrooms nationwide) and was deemed to be technologically adequate and fit for purpose. In addition to teaching duties, the teacher was undertaking graduate studies and had voluntarily accepted to participate in the current study for the purposes of self-improvement. The teacher, who was continuing studies for a Master's in Education showed high occupational development and motivation to voluntarily participate in the study, in addition to work commitments and graduate studies. The teacher expressed that she did not feel herself efficient in technology use in education and that she was suitable for the teaching activity requirements of the study.The most important reason for choosing the teacher as a participant in this study is that she is volunteer. It is very important that the teacher takes part in all these steps voluntarily in this research, which requires long-term learning of online environments, the development of teaching materials and the implementation of the materials in the classroom. However, in the pre-interview with the teacher, information about her relationship with technology and usage habits was obtained. Accordingly, the fact that the teacher's basic computer and Internet use skills are sufficient to

learn to use new Web 2.0 tools and to develop materials in these environments has been another reason for preference.

Data Collection Technique and Tools

In order to address the sub-problems of the study, the required data were collected using a semi-structured interview form, a teacher's diary, a researcher's diary, and video recordings. For the data collected from the teacher, a research approval document was received from the MoNE.

Semi-structured interview form

Two semi-structured interviews were conducted, one at the end of the online environment instruction and one at the end of the complete process. Semi-structured interview question items and questions for the end of the process were prepared by the researcher based on the study's research purpose, and reorganized based on the feedback and recommendations of the thesis committee.

Teacher's diary

Since the study included the teacher's introduction to each of the online environments and also developing teaching materials within these environments, the teacher's views regarding the activities were considered to be important data. In the pre-interview with the teacher, the importance of keeping a diary after each application was explained during the research period. It was decided to focus on her experiences with online environments in her diaries, and it was aimed for the teacher to share his experiences without drawing a definite frame. Therefore, the teacher's views were collected throughout the process and the teacher was asked to maintain a diary regularly from the start of the study. These data were used to verify the researcher's data and thereby to increase the validity of the study.

Researcher's diary

Throughout the data collection process, the researcher noted each activity in the researcher's diary. Decisions taken with thesis advisors, the applications with the teacher and students, the decisions of the thesis committee, and the researcher's ideas about the study were all included in the researcher's diary. Additionally, the researcher's diary was added to the report presented to the thesis committee every 6 months, with feedback received back about the data collection process.

Video recordings

Each stage of the data collection process was video recorded, and the videos were then transcribed by the researcher so as to obtain the raw data. The audio and visual quality of the video recordings were considered from the outset to prevent any unnecessary data loss related to the process or equipment used.

Data Collection Process

For the first stage of data collection for the study, eight online environments (seven different types) were introduced to the teacher, with the researcher providing the necessary instruction. For the second stage, under the guidance of the researcher, the teacher prepared online teaching materials based on the ninth-grade English lesson fall semester learning gains using the selected online environments. Additionally, the data collection process was applied based on the Technology Integration Planning Model, which was selected on a theoretical basis, and the stages were applied as given in the model.

Accordingly, for the data collection process of this study, the English lesson ninth-grade curriculum gains were analyzed with the participant teacher, and the fall semester gains were selected for the material to be prepared based on the teacher's aspirations and teaching requirements. After both fields experts and the researcher had analyzed these gains, suitable online environments were selected. In order to teach using the selected online environment, the teacher's weekly class schedule was analyzed and a mutually convenient time was agreed with the researcher. Based on daily plans prepared by the researcher, and approved by the thesis committee, prior to the teacher conducting the online teaching, the researcher applied a series of instruction lessons in the usage of the eight selected online environments, which were completed over a total of 13 weeks.

During this first data collection stage, the researcher's instruction sessions with the teacher were video recorded. Additionally, both a teachers and a researcher' diary were maintained, and at the end of the process, semi-structured interviews were conducted in order to collect the teacher's views about the process. After having been instructed in the usage of the eight selected online teaching environments, the teacher then used these environments to generate 18 online teaching materials that complied with the ninth-grade English lesson fall semester curriculum with a total of 29 applications. For this process, the data collected were in the form of video recordings, as

well as a researcher's and a teacher's diary that were completed during the online teaching material's development.

Data Analysis

All the qualitative data collected were transcribed by the researcher and grouped first into the upper themes and then into the sub-themes, and the content analysis technique was used in the analysis of the data. Table 1 presents the data collection tools and data analysis techniques applied in this study, which were based on the purpose of the study.

Table 1

Data Collection Tools and Data Analysis Techniques

Research Questions	Data Collection Tools	Data Analysis Technique
1. What are the ninth-grade English lesson curriculum gains based on online teaching material prepared by the teacher during the a) planning process? b) development process?	• Teacher's diary • Researcher's diary • Video recording • Semi-structure interview with teacher + audio recording	• Content analysis
2. What problems were experienced by the teacher during the educational material development?	• Teacher's diary • Researcher's diary • Video recording • Semi-structure interview with teacher + audio recording	• Content analysis
3. What were the solution recommendations put forward to problems faced by the teacher during the educational material development process?	• Teacher's diary • Video recording • Semi-structure interview with teacher + audio recording	• Content analysis

Validity and Reliability

The researcher applied the following method in assuring the validity and reliability of the data collected in the study:

●Collected data and methods were planned in advance;

●Participant was informed about the objective of the research, data collection process and tools, the participant's role in this process and how the results will be published and used. Participant consent form was filled every stage of data collection process by participant teacher;

●The participant's personal information was kept confidential and protected the privacy of participant and her/his information from unauthorized access, use, disclosure, modification, loss or theft;

●Sufficient amounts of data were collected;

●Researcher remained objective during the data collection and its analysis;

●Observations and diaries were recorded onsite and in a timely manner;

●Data were collected at different times and using different tools to ensure data diversification;

In addition, in order to increase the credibility of the research research;

• Has a long-term interaction with the teacher,

• Member checking was done by having the teacher read the observation notes right after the study.

• The thesis monitoring committee and advisors were consulted at regular intervals and consulted for expert opinions.

• The raw data and the analyzed data were recorded, the confirmability of the study was kept high, and all the processes of the research were explained clearly enough that another researcher could apply it in his/her own study in accordance with the transferability criteria.

It is considered important that qualitative research findings have trustworthiness as well as validity and reliability. The strategies in this study, which was carried out considering the trustworthiness criteria of credibility, reliability, confirmability and transferability, are also recommended for other qualitative research.

Ethical Issues

●Participant was informed about the objective of the research, data collection process and tools, the participant's role in this process and how the results will be published and used. Participant consent form was filled every stage of data collection process by participant teacher.

●The participant's personal information was kept confidential and protected the privacy of participant and her/his rinformation from unauthorized access, use, disclosure, modification, loss or theft.

Findings

Data of this study were 13 online environment teaching application video recordings made with the study's participant teacher, plus the teacher's video recordings for 29 online materials development, semi-structured interviews conducted with the teacher, and the teacher's and researcher's diaries.

Teacher's Planning Process for Online Teaching Materials

In order to find answers to the research question about how the online material planning process was completed by the teacher for ninth-grade English lesson curriculum gains, the themes obtained from the content analysis were found to be as follows (Table 2):

Table 2

Themes for Data Obtained In Online Teaching Material Planning Process

Themes
Online environment selection for gain
Using lesson book
Using the Internet
Planning content presentation
Students using online environment

Based on data obtained from the teacher's online teaching material planning process, the following themes were found: Material planning process, Suitable online environment selection for gains, Using lesson book, Using the Internet, Planning content presentation, and Students using online environment. Accordingly, the most common theme was "Suitable online environment selection for gains". This was expressed in the teacher's diary for the online environment teaching process as follows: "*Today, we analyzed ninth-grade English lesson gains with the researcher, and she provided information on all the suggested online environments. Those environments were found to fit the gains*" (Teacher's diary).

Based on the "Using lesson book" theme determined from the data, the next gain after the teacher selecting an online environment to match the online teaching material plan was analyzing how the related gain was included within the lesson book. The teacher benefited from the lesson book

material content in terms of sentence structures, which words should be included, and at what level would content be transferred, i.e., the online teaching material basis framework. For example, the teacher's diary included the following; "*Although the subjects are clear, preparing the content seems problematic. Which sentences will be used, which words etc...for that, I decided to use the same books that the children have*" (Teacher's diary).

According to the next theme determined, "Planning content presentation," the teacher selected the online environments and identified the content scope and level by using the lesson book and the Internet. Then, the teacher planned how to present the content to the students using the selected online environment. The teacher's material planning process was included in the researcher's diary as follows: "*Today, the teacher planned material based on her view and started the application. Based on the experiences gained from class applications, the teacher planned the material using new ideas*" (Researcher's diary).

From data obtained from the online teaching material planning process, the last theme identified was Students using online environment. In addition to the teacher's content presentation plan, the students' online environment usage was planned. For example, "*We have problems with school Wi-Fi; students cannot connect with their tablets. If they can, they form dialogues, and such dialogues can be between two individuals*" (28'20", 8. online environment teaching application).

After the teacher's material planning stage, the next stage was the teacher's online teaching material development.

Teacher's Online Teaching Material Development Process

In order to find answers to how the online teaching material development process was applied, content analysis revealed the following themes (Table 3):

Table 3

Themes for Data Obtained In Online Teaching Material Development Process

Themes
Teaching principles
Visual design principles
Online environment properties
Time management
Teacher's motivation
Teacher's development

The first theme identified based on data collected from the teacher's online teaching material development process was "Teaching principles." The teacher did not apply any teaching related to pedagogic principles; however, the teacher reflected pedagogic information in producing the online teaching material. The "Teaching principles" theme was divided into "Suitability for students," "From general to specific," and "From simple to complex" subthemes, based on different teaching principles. Accordingly, in the "Suitability for students" subtheme for the teacher's material development process, elements that the students will feel close to, and those appropriate for their age, readiness and interest areas were added. For example, in the video recording of the first material development application, character selection and stance was considered for the students, and in the first added character, a sitting position was shown as self-confident, comfortable and student-facing (39'40", 1. material development application).

The next subtheme determined from the data of the online teaching material development process was "From general to specific." It was seen that in the teacher's grammar rule gain presentation, the rules were included within content based on this principle. For example, the teacher expressed it in the material content presentation as, "*Let's add Nouns title, and then we will move from general to specific like singular–plural. This is better*" (13'01", 23th material development application).

According to last subtheme under "Teaching principles," which was "From simple to complex," the teacher recalled some topics and provided simple content to start. The teacher's views on this topic were as follows, "*We need to start from the basic, but some children might forget. Before attempting the activities in the book, we should remind the students about present tense and time*" (06'02", 7. material development video transcription).

Based on data obtained from the online teaching material development process, next theme was the "Visual design principles" that were considered by the teacher when developing the online materials. Accordingly, the teacher reflected information that was sometimes provided by the researcher on visual design principles for teaching material based on her own views and experiences. The "Visual design principles" theme was subdivided into "Integrity" and "Emphasis" subthemes based on the principles considered by the teacher when developing the materials.

According to the "Integrity" subtheme, the teacher developed materials by considering the researcher's recommendations first, followed by her own considerations in the subsequent stages. The teacher expressed this as follows: "*The text should be of the same size and color for material integrity. I was careful about that in creating the slides*" (Teacher's diary).

According to the "Emphasis" subtheme, which was the second and last in the "Visual design principles" theme, the teacher expressed how she used emphasis principles to attract students' attention to related parts of the material as follows: "*I colored affixes*" and said, "*I can do that, yes, I can do that*" (24'01", 23. material development application).

Another theme for online teaching material development process was "Online environment properties." It was seen that the online environment properties during the teacher's material development process had certain advantages and limitations. Accordingly, the first subtheme was "Online environment advantages." For example, the teacher's views on the Voki environment were; "*This is a suitable environment for in-class pronunciation. It is not complex, the steps are simple, and I easily remembered it*" (Teacher's diary).

The other subtheme for online environment properties was "Online environment limitations." Some technical properties of the online environments were expressed as online environment limitations by both the teacher and the researcher during the material development process. For example, the Toondo environment, in which the teacher developed material on her own for the first time, from the teacher's perspective experienced problems on ToonBook where separately prepared comics could be collected under one book as; "*Two-page comics did not look good when I added them to the book*" (03'45", 3. online environment teaching application). When the teacher saw the problems with the pronunciation of characters in the first material development application using the GoAnimate environment, she said, "*When we increase the number of words,*

it sounds different, did you notice it, the clarity of voice is gone," and researcher corroborated this issue (45'44", 1st material development application).

The next theme identified based on data collected from the teacher's online teaching material development process was "Time management." In both online environment teaching and the material development process, there were positive and negative events that affected time management. First, the negative impact on time management was the study environment. This was mentioned in the researcher's diary as; "*Today, I was late to prepare the environment, since the room we use is also the infirmary at the same time, there was a sick kid in there and so I had to wait.*"

Another theme identified from the data for the teacher's online teaching material development process was "Teacher's motivation." It was seen that the teacher had high motivation to use the online environments and to develop the online teaching materials by this process. For example, in one of the material development applications, the teacher said that she could not remember exactly how to save the comic, but did not want to ask how to the researcher, and laughingly said; "*Don't tell me, I will find it, I want to do everything,*" and then found the related button on the page (17'45" – 18'10", 7th material development application). However, the teacher expressed that certain negative events in this process negatively impacted her motivation. For example, "*We could not log on to the video preparation window. It was blocked on the Internet. The MoNE did not permit access; but again, our own Internet was the solution for that; and we used the mobile Internet of the researcher. However, it could not be opened in the class in practice. I think we have to use our own Internet. As we experience these Internet problems all the time, this decreases my motivation*" (Teacher's diary).

The final theme identified for the online teaching material development process was "Teacher's development." This theme was divided into two subthemes as, "Teacher's technological competence development" and "Teacher's academic development." Accordingly, in the first subtheme, the teacher created her own teaching materials by using the online environment which represents observable development in the research process. For example, in the interview conducted at the end of the process, the teacher talked about the teaching material used prior to this process as follows; "*We always find prepared materials, we open the Internet, then Google it, we get the material and we used it. But actually, before you came, I never asked how could I do it,*

could I even do it, where could I do it, or which environment should I use" (Teacher's 2nd interview). According to the second subtheme, it was seen that the teacher's development obtained from the research data reflected upon the teacher's occupational development and graduate studies. For example, "*I will start my thesis. I need to prepare graphs that explain the process. Or a booklet, and lesson materials for the next semester. I am now thinking whether there is a book prepared as online material? I mean, maybe we were affected*"was linked to the teacher's academic development contribution (Teacher's 2nd interview).

The teacher's online teaching material development process was attempted to be explained based on the aforementioned themes. The following section describes problems experienced by the teacher during the online teaching material development process, as well as the solution recommendations for these problems.

Teacher's Problems During Online Teaching Material Development Process

Based on the content analysis to find answers to the problems experienced by the teacher during the online teaching material development process, the themes listed in Table 4 were obtained.

Table 4

Problems Reported During Online Teaching Material Development Process

Themes
Curriculum
Online environment
Technical problems

Based on data obtained from the teacher's online teaching material development, the first theme includes problems connected to "Curriculum." During the material development application with the teacher, some of the materials prepared were excluded from the ninth-grade fall semester gains as the curriculum changed and new gains were added instead. Therefore, the online teaching material development duration was prolonged as a result. The researcher expressed this in her diary as, "*By the way, we analyzed the annual plan in order to determine any missing materials, and the teacher said that some gains in this year's book were different than last year.*

We decided that the teacher would bring the book and we'll analyze the gains during the next lesson."

The next theme for experienced problems was "Online environments." During the teacher's material development process, there were problem situations related to the online environments which resulted in time losses within the process. The lack of visuals that the teacher had wanted to add to the material in the online environment gallery caused these materials to be prepared over a longer period of time. For example, during the sixth material development application, limited actions for the character in the online environment challenged the teacher and caused her to look for alternative methods. The researcher's diary with the same date expressed the problem as follows, "*she had problems due to some properties of the environment, due to limited character selection and action assignment, which forced the teacher to find more suitable sentences for the gain."*

Based on data obtained from the teacher's online material development process, the next theme was "Technical problems." The online teaching material development process was conducted at the teacher's school during the academic year, and in the teacher's own house during the summer break. The teacher expressed her opinion regarding the problems such as not being able to access the online environment due to the filter put in place by the MoNE as, "*We need to talk about them as well. I mean they want us to use technology but you can't access it. How can I use it on the board?"* (05'20", 6. online environment teaching application).

Teacher's Solution Recommendations for Problems Experienced During the Online Teaching Material Development Process

According to the content analysis of the teacher's solution recommendations for problems experienced during the online teaching material development process, the themes detailed in Table 5 were obtained:

Table 5

Solution Recommendations for Problems Experienced During The Online Teaching Material Development Process

Themes
Mobile Internet use
Active online environment use
Recommendations to the MoNE

Based on data for the teacher's solution recommendations for problems experienced during the online teaching material development process, the first theme was identified as "Mobile Internet use." The solution recommendation as shown in the Teacher's diary was, "*We could not log on to the video preparation window. It was blocked through the Internet by the MoNE who did not permit us access. Again, we had to use our own Internet as the solution for that, and used the researcher's mobile Internet access."*

The next theme was "Active online environment use." The teacher's views were expressed as follows in the teacher's diary: "*We continued with the GoAnimate application. I had some questions, and we worked on them and repeated the application with the researcher. If we do not frequently repeat these applications, we can forget some parts. You become faster and more practical with each practice.*"

Last theme identified based on the obtained data was "Recommendations to the MoNE." The teacher expressed in the fifth material development application that IT guidance teachers should work as guides during the online environment material development as follows: "*Actually, at the beginning of the year, we will have these in schools: Formators will help you when you have shortcomings, because they only deal with schoolwork and interactive boards etc. Actually, they will help us deal with our materials,*" which forms part of the recommended technology integration at schools and the teacher's material development (20'04", 5th material development application).

Conclusion, Discussion and Implications

The results of this study are summarized and discussed within this section. The research was formed as a design-based study that was conducted in Turkey on an English teacher within the scope of an professional development activity that used an online environment for teaching and an online teaching material development process based on ninth-grade fall semester gains for English language, and the literature related to the discipline. The limitations of the study can be listed as the characteristics of the researcher and his ability to interpret qualitative data, the characteristics of the participant teacher, the time spent by the researcher and participant teacher in the research process, the corrections made in line with the thesis monitoring committee decisions, the technical features of the selected online environments, and the internet service connection provided by the MoNE to schools. When the teachers' views on technology integration in the literature were analyzed, it was seen that teachers found technology usage to be beneficial; however, teachers felt insecure in practice (Djiwandono, 2019; İşman et al., 2007; Somyürek & Karabulut Çoşkun, 2013; Tonbuloğlu & İşman, 2014). Based on results obtained from the current study, where the teacher expressed being "afraid of technology" parallels to the literature. However, it was found that the teacher's voluntary participation in an occupational development activity, i.e., the internal motivation for occupational development in technology usage, to be of significant importance. This result is parallel with the findings of Eren et al. (2007), who found teachers' internal motivation was a basis for in-service training willingness. Schrum (1999) criticized using similar methods without considering teachers' individual differences, and recommended applying technology integration training as personalized occupational development activities Accordingly, in the current study, guidance was provided for the participant teacher in order to agree upon the most suitable time and environment to achieve the selected teaching purposes; and in this case, it was seen that the teacher's motivation was high throughout the entire process. Therefore, it is believed that it is possible to resolve levels of inadequacy for technology usage through appropriate occupational development activities and in-service training. Teachers' in-service training views found in the literature verify this result. For example, Yeni Palabıyık (2013) determined that teachers' technology integration-related in-service activity limitations to be expert support, guidance, content, lack of practice, and limited time, insufficient breaks and intense in-service activity hours. When this was compared by occupational development activity within the scope of the current study, it could be stated that

planning such an activity as a personalized occupational development activity could prevent teachers' decreased motivation. Similarly, teachers expressed that participating in personalized occupational development activities were more successful when they made their own decisions on self-learning and in the teaching process where they can realize their own objectives, time and environment selection (Akman, 2018; Marti et al., 2015). The authors also stated that such occupational development activities can be seen as successful in the reflections of students. Teachers' desires to adjust in-service training time that is more suited to them was stated by Cesur and Yelken (2015).

It was seen that teachers mostly use a lesson book to plan online teaching materials. Related to the contribution of lesson books to online teaching material development, Rezvani and Ketabi (2011) stated that matching the online environment with English lesson books will realize more successful results. In this sense, it is believed that by matching lesson books with current technologies, a greater contribution to online teaching material development can be provided.

In the current study, the teacher used the Internet in addition to the lesson book. Similarly, Sarıca and Çavuş (2009) proposed that English teachers should design their own activities by using simple tools found on the Internet. In the current study, the teacher consulted both the lesson book and the Internet, but decided how the content would be presented in which activity. In another study that emphasized the importance of online teaching material planning process, Kovalik et al. (2014) used four different Web 2.0 tools used by four different teachers' in their teaching process, and found that contrary to the teacher and the researcher in the current study, the teachers did not undertake detailed planning; and while students enjoyed using the environment when instructions were provided, this was not sustained. Additionally, it was stated that using Web 2.0 tools in the teaching environment required serious planning and process management. It is believed that the voluntary participation of the teacher in the current study's occupational development activity and the content planning with the teacher contributed to the teacher's motivation.

In the current study's online teaching material development process, it was seen that the teacher applied teaching principles to the developed material. Providing content from simple to complex and suitability to the students' principles were reflected in the developed materials. Although pedagogic training was not given to the teacher, in the personalized in-service training

application it was seen that the teacher successfully applied existing pedagogic knowledge with technological competence. When the materials were designed, providing content from general to specific, from simple to complex, and using figures and objects in visuals and texts that the students would feel as being familiar was considered. In all material, text and visuals, the font, color, size, title placement, as well as visual drawings or using real photographs was considered in terms of coherence and balanced placement of visuals and text elements on blank parts of the page. In this way, when the materials were prepared, simple to complex, closeness to student, and general to specific teaching principles and integrity, and emphasis on visual design principles were applied. It was seen that this application complied with the related literature, with Girgin (2011) having stated that language teaching cannot be independent of social culture, and that teachers should use online environments by considering the students' properties.

In the current study, well-designed material that was easy to use, and compliant with lesson content and purpose, with environments including different properties were considered by the teacher for the online teaching material development. Online environments suitable to foreign language teaching were selected based on experts' and the teacher's viewpoint and from online environments where foreign language skills were taught. The most important online environment advantage was stated by the teacher as ease of use. Karlin et al. (2016) expressed that teachers that use various Web 2.0 environment reported on their ease of use.

Another result based on the teacher's view of the online environment's advantages was the suitability of the online environment to foreign language teaching. Activities deemed to be suitable for foreign language skills learning were included in the materials developed by the teacher within the online environments. It was seen that the teacher mainly used the video development environment in this process, which was believed to be similar to that reported by Çakır (2006), in that video usage in language teaching contributes to students learning language within context.

The online environment limitations experienced by the teacher during material development were limited content on some environments (e.g., visual, character, character action) and environment-related problems when uploading images externally. Limitations about Voki, which is one of the online environments used in the study, was also expressed by Yona and Marlina (2014). Karlin et al. (2016) experienced similar limitations with various other online environments. Since these

environments are all online, some of the limitations were related to environment updates, whilst content limitations were overcome with alternative online environment usage.

The teacher not finding the content she was looking for in the online environment was a limitation that affected the time management of the material development process. The teacher not being able to add materials she wanted, as was originally planned (e.g., visuals, characters, character actions), required an alternative element search to be performed which resulted in a certain time loss, although it was noted that the teacher did not complain about this. It is believed that this was caused by the teacher's high material development motivation and that the material development was undertaken according to the teacher's most suited timeframe.

In the current study, the findings related to the teacher's occupational development were analyzed in two areas, technological development and academic development. The teacher developed technology skills by using the online environments. Prior to this activity, the teacher believed that she did not possess the courage, but found that during the process, she gained a significant degree of self-confidence. The teacher's technology competence development was similar to Mandinach and Cline's (1992) teachers' four-staged process in technology usage. Additionally, by supporting Davis' (1989) perceptive usability and perceptive ease principles of the Technology Acceptance Model, the teacher accepted and used the online environments that increased her occupational performance and which in turn made it easier to use them and to show development in this field. Since the teacher was also undertaking postgraduate academic studies, it was seen that she emphasized occupational development; therefore, the teacher's high level of motivation was reflected throughout the study. The teacher completed proceeding and paper studies within this process and the teacher's development in the field was supported. As a result, it can be said that the teacher's technology integration attitude positively changed. Studies showed that in-service activities should parallel teachers' occupational development purposes; similarly, the current study showed there was a contribution to the teacher's motivation (Akman, 2018; Eren et al., 2007).

In the current study, the teacher provided recommendations to the MoNE for further technology integration in schools. It is believed that the teacher expected to see certain adjustments implemented by the MoNE regarding technology integration. Other studies performed with teachers reported teachers' views with similar recommendations to the MoNE with regards to

technology integration (Banoğlu et al., 2014; Göçen et al., 2020; Keleş et al., 2013; Kurt et al., 2013).

The recommendations of the current study are as follows:

●With the lesson book being an important resource for teachers in material development, including multimedia elements, teacher guidebook designs could be used as a guide to teachers in their online teaching material development.

●Similar studies have shown that related Internet settings are important for students to use the Internet connection at school in order to ensure more effective student participation.

●In the current study, eight online environments were covered and it is believed that studies on different online environments can contribute to the literature and to set an example to other teachers.

●It is believed that without the participants' occupational development requirements being established in advance, standard in-service training application for all teachers would be seen as insufficient to reach the desired success level. Additionally, it is important to apply similar occupational development activities to in-service teachers that require such activities.

●It is believed that in-service application based on teachers' programs (either with permission granted during teaching hours, or in their spare time) can contribute to teachers' in-service training motivation.

●The current study could be seen as an example to other occupational development studies in the literature, as this study was applied as a personalized occupational development activity based on time, environment, and the requirement selected by the teacher.

●It is important to upload the required software and to make safety filter adjustments to effectively use the online environments under the Turkish Government's national FATİH project and Internet connections provided by the MoNE.

Statement of Conflict of Interest

There were no external funding sources for this study. The Authors declare that there is no conflict of interest.

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ETİK BEYAN: "Analysis of A Teacher's Online Teaching Material Planning and Development Processes: English Lesson Example" başlıklı çalışmanın yazım sürecinde bilimsel, etik ve alıntı kurallarına uyulmuş; toplanan veriler üzerinde herhangi bir tahrifat yapılmamıştır ve veriler toplanmadan önce Eskişehir İl Milli Eğitim Müdürlüğü Araştırma İzin Komisyon'ndan 06.10.2015 tarih ve 88074293/605.01/9957585 sayılı etik izin alınmıştır. Karşılaşılacak tüm etik ihlallerde "Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi Yayın Kurulunun" hiçbir sorumluluğunun olmadığı, tüm sorumluluğun Sorumlu Yazara ait olduğu ve bu çalışmanın herhangi başka bir akademik yayın ortamına değerlendirme için gönderilmemiş olduğunu taahhüt ederim.