

From traditional to open learning: digital transformation project

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Abstract—This project aims to find solutions for the problems encountered in a rural university which has been struggling to adapt to educational movements and its practices: online learning and open education. The problems have already existed at the university, but the pandemic process made them more visible and critical to address the practices for teaching and learning processes. Therefore, two phases have been developed and will be applied respectively: first to implement strategies considering the faculty members' lack of digital literacy skills and lack of experiments in online learning environments, and second to enhance faculty members' knowledge and experience on open education and open educational practices. This new project has not had observable and practical outcomes yet except the series of expeditious trainings applied considering digital literacy. Therefore, we mostly focus on the rationale, purposes, and the structure of the project in this paper. We have also outlined the phases of the project, which have also inner cycles and approaches, as well as the collaborators we seek to share the experiences and visions.

Index Terms—blended learning, digital literacy, open education, open educational resources,

I. INTRODUCTION

The delivery of instruction has been shaped by the technological developments and new perspectives of educational practices for years. E-learning and evolving open learning approaches bring new practices on how to integrate technology into educational contexts. In Turkey, e-learning and blended learning are not new terms that some institutions have been practicing it by offering for some courses and degrees. However, many institutions prefer still practically to apply traditional approaches including face-to-face instruction. On the other hand, open education and open learning are considerably new ideas for educational system in Turkey. The first organizational attempt to develop open educational resources (OER) through OpenCourseWare (OCW) system was established in 2007 by the Turkish Academy of Sciences, with a consortium of 34 universities [1],[3]. Also, some projects and researches have been practiced regarding open education related terms: open access, open license and OER. Up to now, besides the institutions' few open courseware systems and online systems, two initiatives have evolved during the Covid-19 pandemic process: Ministry of Education's (MOE) EBA project and Higher Education Council's (HEC) national repository movement. EBA is a project run by MOE at the K-12 level. On EBA, students can access the contents of their classes with their username and password. Some materials

have also been offered as open access (<http://www.eba.gov.tr/>). On the other hand, HEC's national repository functions as a national directory which collects the courses provided by the universities at their OCW or online systems. Beside the limited number of openly shared courses and resources, this repository has not reached its full potential for each discipline yet (<https://yokdersleri.yok.gov.tr/>).

During the pandemic process, all institutions have been experiencing a new platform of e-learning and faced many challenges considering online learning components. In this project, the researchers will investigate the current situation at a public rural university located in the north region of Turkey and provide a roadmap to address the problems. The university offers undergraduate and graduate degree through bachelor, master, and doctoral programs and preserves 13 faculties, 3 colleges, and 13 vocational schools. This project will be applied in Faculty of Education to enable faculty members to create a more personalized, flexible, and open learning environments. In the Faculty of Education, the delivery of instruction is highly traditional, and the online practices are limited to the personal attempts of faculty members who use different methods of teaching. Until the pandemic process, the university had not offered a Learning Management System (LMS), therefore, the ALMS were first introduced to institution at the beginning of this process (This system was established but the integration had not been completed before the pandemic process). Therefore, the institution has faced many challenges to adapt to online learning environment considering the lack of knowledge, skills, motivation, and experience.

In this project, we have applied a problem-based approach which focuses on the design process to address the problems. This study also embraces a pragmatic perspective to combine the best theory, concept, or mode of instruction to follow [2]. This iterative process will enable the researchers to gather a holistic approach to solve the problems which are defined as below:

- Problem I: Faculty members' lack of adaptability to blended or online learning environment
Related problem: Lack of knowledge about digital literacy
- Problem II: Lack of shared practices and resources on specific courses
Related Problem: Lack of knowledge about open education and open educational resources

Based on the problems, two phases of the design process will be followed, respectively. These phases are considered iterative to find the best solutions for the problems identified in this project. Hereafter, the solutions are preferred to mention as *strategies* because solutions may refer to complete and apparent applications which could limit the researchers to find several approaches to address the problems. Therefore, some strategies will be developed during the phases of the study. Alongside the phases, some organizational strategies will be implemented to organize the programs and to provide support mechanisms (Staff Development Unit) as well as to enable open educational practices (OCW, open directory). Figure 1 shows how the project will be held considering the strategies and the organizational applications for the problems in the system.

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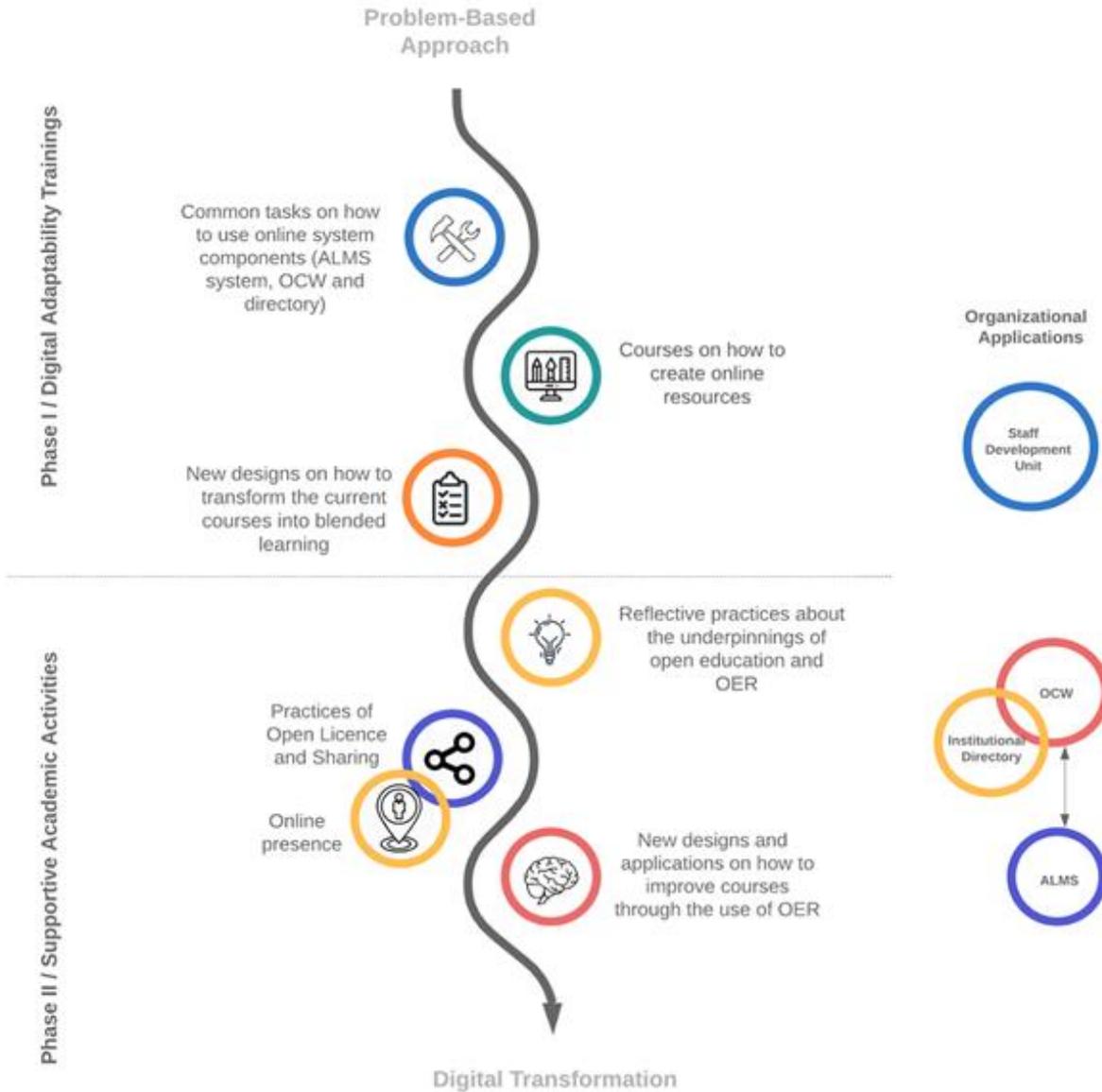


Fig. 1. The flow of the project in two phases

A. Phase I:

The first phase of the project mainly focuses on Problem I enhancing faculty members' capacity of digital literacy skills and increasing their adaptability to blended learning environment by including a series of training sessions. During the pandemic process of Covid-19, the experiences of faculty members showed that some faculty members struggled to adapt to e-learning system, precisely to the institutions new ALMS system and its technical assets. To add, first problem addresses the lack of faculty members' digital literacy skills that few of those were practically equipped to transform their courses to an online learning environment. Most of the resources used in traditional classroom are not online or diverse regarding the type of online resources. Therefore, the primary purpose of this phase is to enhance faculty members' digital literacy skills and their effective use of online systems available at the institution. However, their limited practices in online learning environment could influence their adaptability to create online resources and their sharing practices, so that blended learning as a curriculum strategy will be presented to improve the current practices in online learning environments. Rather

than a complete e-learning design, blended learning will be presented as a compatible strategy for traditional learning to revise the current curriculum strategies and to integrate the technology into curriculum design. This phase consists of developing online instructive trainings, online courses, and workshops. Online instructive training mostly focuses on hard skills for developing technical skills in a specific context that the trainings will provide the technical details and usability of institutions' online systems. Most instructive resources have been presented so far related with the use of ALMS system, but future trainings will be developed for the use of OCW and directory system. For creating online resources, a series of online courses will be implemented. At the beginning of this process, a discussion-oriented workshop will be applied to reflect on the current resources used and future subject-specific online resources. These initial workshops will be developed for each department which shaped the selection of the resources. For blended learning, an online course will be developed to present the details and affordances of blended learning. This course encompasses the foundation, pedagogic approaches, and sample applications of blended learning used in

current educational settings. This initial course aims to raise awareness about blended learning and to reflect on current practices in formal education settings. A series of workshops will follow to undertake an interactive environment for faculty members to design their courses by deciding on what level and format they will choose to blend their curriculum. In a nutshell, these training sessions are aimed to display how to transform the traditional courses into blended learning environments. However, this process does not hold the aims of convincing faculty members to apply blended learning approach, rather it is an informative process to show different modes of delivery, their affordances and effects on learning environments. Precisely, it is a step for faculty members to engage in online environments and to explore new advancements in educational applications.

B. Phase II:

The second problem raised from the pandemic process is related with the lack of knowledge about the license issues, lack of shared practices and resources in online community. In accordance with the lack of digital literacy skills and limited number of online resources, faculty members also struggle to transform their current resources into online learning environments. In traditional classrooms, the closed-community may bring conformity for faculty members not to care about the resources' quality and copyright issues. Thus, the limited online presence (in here, the presence is only located in the institutions' ALMS) displayed faculty members' concerns about the quality and the content of the resources and the lack of knowledge on copyright issues. Until the pandemic process, personal attempts had been implemented by some faculty members to share their online resources and course components by using self-moodle systems (Google Classroom, Edmodo, etc.), however, these platforms have also provided a closed-community for faculty members and students. To add, the attempt of HEC shows a lack of shared, qualified, and subject-specific resources and courses for faculty members to revise their current approaches. Therefore, the second cycle of the project is trying to present a new path for faculty members to be a more collaborative, open and reflective on their teaching practices by interacting with the community of learners, instructors, educators, policymakers, administrators. For this cycle, the underpinnings of open education and strategies for integration of open educational practices to teaching and learning processes will be presented. A series of seminars will be conducted about the open education, its affordances, and the nature and purpose of education from the perspective of sharing culture. Sharing culture and open license requires more action to take so that a workshop will be conducted to present open licenses (Creative Commons) and how to publish the resources aligned with the open licenses. Online presence is also an important issue to take into consideration that the faculty members' personal or academic presence in online platforms could influence their adaptation to the online environment and sharing practices. Thus, this issue is not a primary focus, but it will be presented under the sharing practices. At the end, focus group discussions and workshops will be developed for faculty members to engage in collaborative activities. This process focuses on how to transform their prevailing activities through the lens of open education by following the OER-enabled pedagogy [4]. This OER oriented pedagogy fits well with the project's purposes and the researchers' roadmap for open education. This pedagogy presents many strategies and scenarios to integrate the online resources into the curriculum and to share them under open licenses. Discipline-oriented workshops will be applied for faculty members to reflect, critique, design and revise their courses and resources, and to share their practices with the members of the community. Alongside with this phase, an OCW platform which enables faculty members to share their course process and materials,

and an institutional directory to locate different OERs and online resources for different disciplines will be established. OCW platform will be connected to ALMS for faculty members who prefer to share their course resources under open license.

The university does not have a unit for staff development and guidance for teaching and learning practices. Therefore, there is a need for a unit which encompasses instructional technologist, librarian, subject specialist, and technical specialist to organize and develop online courses, seminars, and workshops. This unit could also offer the support and guidance for faculty members to adopt the new practices (blended learning and open learning) and to apply practices and strategies (sharing, creative commons license, online resource creation, the usability of online platforms). These initial strategies enable the researchers to design the project, to solve the problems specific to this case and to consider the elements for the solutions of the problems: knowledge, resources, and motivation [2]. Therefore, the strategies will cover the practices, concepts, and applications which will best address the problems in this case.

II. RESEARCH ACHIEVEMENT AND OUTCOMES

In this project, the initial observation and experiences emerged during the pandemic process, however, before that process, the institutions' culture and practices about the online learning environment were limited to follow a traditional-oriented approach. Therefore, the problems explored were also valid in advance, but the pandemic process made the problems more visible for faculty members, administrators, and policymakers. The researchers' primary aim is to develop an open culture to create interactive, collaborative, and accessible learning environment but the prevailing culture at the university indicates critical deductions that the faculty members have not prepared for open practices yet, rather they firstly need to embrace the pedagogy, approaches, and strategies of online learning to engage in blended learning practices. Therefore, regarding the first problem, institutions' Distance Education Application and Research Center prepared a series of know-how videos and text-based guidelines for faculty members to practically design some online resources (instructive videos, syllabus, etc.), to prepare online courses (how to prepare an online assessment, how to prepare a YouTube broadcast, etc.), and to use online systems (ALMS, Edmodo, Google Classroom, etc.) and digital tools (OBS, Zoom, FreeConference, etc.). These useful resources were prepared to solve the problems that occurred during the online learning process, and they provided quick solutions to deploy the traditional practices. At the end, majority of faculty members used at least one learning management system (ALMS or other LMS), prepared at least one visual and text-based material for each week, scheduled at least one video conference for meeting with students during the semester, and used online assessment tools and learner-oriented assessment approaches (reports, online portfolios, projects, and online materials). Thus, the outcomes of this process look promising, but some faculty members and students felt uncomfortable in online learning environment which showed minimal interactions between students and faculty during this process. This radical and somewhat compulsory transition might influence faculty members and students' perceptions towards online learning and negative experiences might alienate them from the new practices (some observations and informal conversations at the institution showed that the students and faculty members wanted to proceed with traditional learning in the future). Therefore, the blended learning and its affordances and practices on educational settings might support more balanced transformations and adaptations to future educational movements.

The second phase has not presented any outcome so far, but the

formation of OCW and the open directory will be carried out alongside the practices in Phase I. The prototype of the system will be tested by some faculty members who are willing to share their resources. Also, the system components will be utilized for the faculty members to easily find the resources through open directory and to share self-resources and courses through OCW. Therefore, ALMS and OCW will be connected for users to easily share their courses located in ALMS via OCW.

III. FUTURE COLLABORATORS

As mentioned above, this project offers a new roadmap to address the problems evolved during the pandemic process, but the essential aim is to offer a more comprehensive framework on how to transform the current practices for those who will be adaptable to a more open, flexible and technology-enhanced educational setting. The researchers are from instructional design discipline and have online and open learning experience but in an institutional context, their experience may not be enough to provide a holistic picture. So that we are looking for collaborators:

- To share their stories about the barriers, and challenges they faced, practical solutions for the problems encountered while adopting OERs.
- To share their experiences, designs, and applications regarding

- blended learning environments
- To share their visions about open education and their current practices
- To collaborate in a community of sharing practices, to reflect on new designs and to create an online environment on specific subject matters

We notably care about the stories and experiences of the experts, designers, and users especially from the rural communities where the resources are limited while engaging in the process of new movements. Each organization, institution, workplace have specific features and solutions for the problems, but we need examples and guidance to face the challenges during the process. Regarding the workshops, the primary aim is to enable faculty members to design their curricular activities, however as open education suggested, the essential part of the design is to be present in online community to share, reflect and revise the product and to build an interactive knowledge transmission between the members of the community. Therefore, especially the faculty members, instructors, educators, and researchers are welcomed to involve in a community with the faculty members at our institution to form an interactive and international environment. As a sample form, Table 1 displays the general strategies, future directions and future collaborations of this project.

TABLE 1
THE GENERAL FEATURES OF THE PROJECT

Problems	Strategies	What have been done so far?	What will be done?	What do we need for collaboration?
Problem I	Common tasks for using online system components	Instructions for technical assets of ALMS Identify requirements for Moodle LMS as template, database, etc.	Instructions for technical assets of OCW and directory Instructions for sharing course components	Share experiences at these two headlines. Issues about Moodle accessing permissions, Data Security & Performance Issues
	Courses on how to create online resources	Instructions for using some programs and tools (video editing, video shooting, online conferencing, etc.)	Online courses will be developed for creating online resources (visual, auidal and interactive materials)	
	New designs for Blended Learning		Online courses and workshops to show different approaches, types of content and medium	The experts or the experienced instructors to share their designs, approaches and strategies for blended and e-learning
Problem II	Information about Open Education & OER		Seminars about the open education and OER. The current practices and affordances.	Experts on open education and OERs to share their experiences and their visions regarding accessible, interactive and adaptable information and the place of open education in the future educational practices
	Practices of Open License & Sharing		Seminars on open licenses Workshops on how to share the resources with these licenses	Share experiences about copyright issues (May be legal situations)
	Online Presence		Seminars about how to increase the academic presence in online platforms and why we need that Focus group discussion & workshops to reflect on current practices, problems, and possible solutions Discipline-oriented workshops which enable to design a new course and to share the practices	Share experiences on online presence and provide examples Instructors to collaborate and to share the faculty members' designs, critical eyes to create a community of practice

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