EVALUATING AUDIO BOOKS AS SUPPORTED COURSE MATERIALS IN DISTANCE EDUCATION: THE EXPERIENCES OF THE BLIND LEARNERS

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ABSTRACT
Anadolu University has a technical infrastructure, well-qualified faculty, and operates in an innovative and flexible frame. It takes an initiative role to meet the needs of higher education in Turkey by providing equal opportunity not only to satisfy those who value the principle of lifelong education but also seeks new information via distance education with the help of information and communication technologies. Anadolu University Open Education System utilizes all the facilities of contemporary education technology as well as traditional methods in its practices of distance education. Moreover, it provides the learners with the individualized, diversified and enriched services and the opportunities of contemporary education and communication technologies.

The audio-book project is designed and based on individualized learning principles, notablly for the blind students, in the scope of Anadolu University Open Education System. This project enables the blind learners to study on their own, exempting them from the requirement of studying with someone else, and provides them with the opportunity to study any subjects in the book at their suitable convenience. There are approximately 300 blind students involved in this system. There are 14 course books tailored for the blind students needs whereas more than 21 books of the process of recording are still utilized. The Faculty of School of Music and Drama of Anadolu University vocalize these course books in a radiophonic way. Each course book is numbered according to the order of units, the access to the subjects is simplified, the subjects are distinguished from each other by music and the narration is enriched via emphasizing the important sentences in the topic. By the help of these resource materials, the blind learners can be able to study more effectively, and the learning will be long lasting. The audio course books are designed and delivered to the blind students in an MP3 format. In doing so, the goal is to reach the other learners of the Open Education on the Internet. Approximately 70.000 learners have been benefiting from this service so far. Moreover, the audio books can be designed in audio CD formats and/or audiotapes based on the request from the blind learners. The aim of this study is to evaluate these audio course books based on the experiences of the blind learners.

INTRODUCTION
As mentioned by Kurubacak and Yuzer (2004), integrating novel technologies and their new capacities to increase educational productivity by considering individual differences in distance education are a paramount essential phenomena in effective learning. To approach educational problems sensibly, contemporary education uses and integrates new technologies into distance education in many developed or developing countries. Also, it provides diverse opportunities to people from different environments, different ages, all income rates and/or all vocational groups. Therefore, these people can obtain an equal opportunity without losing their productivity and arrange their own pace and capacity for education as well as benefit from communication technology (Özgür and Gürcan 2004).

Developing information and communication technologies offer a variety of opportunities concerning "sound". Amateur and professional sound recording mediums and materials are made more practical, functional with a high-quality sound recording possible. This provides new opportunities to open education students, that is the to say that the transformation of the printed books as basic education materials into the audio books makes it possible to create new possibilities to study for both the blind and other students. Technology is getting more compact, becoming cheaper, mobile and widespread. As a result of such improvements in technology, the audio books in digital format can be listened to in many different places. Separating the books into different tracks according to units and subject titles enables the students to study faster by going back and forth when covering the subjects of the units. Furthermore, recording on tapes is almost abandoned and analog recording on tapes is replaced by sound recording on materials like CD (Compact Disc), DAT (Digital Audio Tape), MD (Mini disc) or recording directly on computer disc. In addition, the audio books are recorded in MP3 file format to enable students to study via the Internet, CD and MP3 player.

Anadolu University Open Education Faculty produces its course books as "audio books" especially for the blind students but all other students benefit from this project. Audio books offer blind students to study more independently wherever or whenever they want without other people's help.

Using audio-book for distance education
Audio books are educational materials that blind learners can use in every situation and every time without being tied to any place or without other people's help. Audio books produced for blind learners can create an environment to provide, enrich, inform, guide and teach subjects fully by creating an environment to learn and also develop independent learning skill to solve problems and answer questions as well as discuss different course related topics. The benefits of audio books in distance education provide an easy access, low cost and swift alteration of the content when it is necessary. Since audio books are educational tools to support learning, distance programs must be established with simple vocabulary, supported with music and sound effects while the length of program, should ideally last between 45–60 minutes. Additionally, blind students need to listen to audio–cassettes, CDs, MP3 players, etc. and enjoy the experience of being heard on audio book. Learners can achieve some of course objectives only with the help of an audio book:

- Audio book present *raw sounds* for learners to experience; these sounds may be natural (e.g. the call birds or animals), mechanical (e.g. the grinding of gears), musical (e.g. the magic of Mozart), etc. and present foreign language dialogues. Also, it provides a spoken glossary of terms which are difficult to pronounce terms.
- Presenting some conversations can be analyzed, e.g. between doctor and patient, sales staff and criminals talking about their way of life.
- Providing an *expert talking* can engage informal communication styles.

For tutoring, i.e. guiding learners through a task or exercise that requires eyes and hands as well as ears, for example:

- To study a series of diagrams or photographs.
- To operate a machine or piece of equipment.
- To assemble a model.
- To deal with physical or biological specimens.
- To complete a form or questionnaire.
- To set up equipment and/or an experiment.
- To consult tables of statistics, accounts, etc.
- To examine a map, plan, blueprint, etc.
- To provide guidance in fieldwork situations, etc.

Audio books are not so widespread but the inexpensive cost and their potential in open education contexts is easily overlooked. In subject disciplines such as music, where sound is important for blind students, the use of an audio book as an educational medium is already well developed. In multimedia packages, sound and images are often combined to with good effect, yet audio book can sometimes play a similar role at much less cost. The use of audio books to support distance education can be extended to most disciplines. The following suggestions may help support diverse learners by putting audio books in good use (Race 1998: 99–101):

- Have good reasons for using audio-books
- Most learners have access to audio-books
- Label audio-books informatively
- Keep audio-book extracts short and sharp
- Use audio-books where the tone of voice is important
- Sound can help open education learners about the subject-related jargon
- Use audio-books to bring open education to life
- Clarify exactly when a recorded episode must be used
- Turn open education learners' listening into an active process
- When using audio-book to help your learners achieve particular outcomes, explain exactly what they must be getting out of listening to the tape
- Consider using audio-book to give open learners feedback on their tutor-marked assignments, and
- Combine audio and visual learning

Audio book must be clearly support learning objectives. To create attractive audio books not only blind learners but also other learners, the following recommendation given below must be considered (Rowntree, 1994, p. 6):

- An audio-book must be physically available to learners -where and when they need it and convenient for them to use- and to control the timing and pace of their learning,
- An audio-book must be one for which they already have, or can quickly learn, the skills to use effectively and that relates the teacher/ trainer have the skills and know- how to use effectively, and
- An audio book must be one that relates clearly to the other course media- i.e. not solely supplemented as an optional extra and afford to use.

Creating an effective learning environment for blind students
Audio books provide the blind learners with the following criteria listed below (Rowntree, 1994, p. 7-9):

Matching your learning objectives: Audio will be virtually chosen it if the learning objectives require learners to respond to sound. An audio book is one way of presenting the necessary stimulus. It will be the best way for blind students.

Appeal to your learners: Any learner is likely to find some media tools more appealing than others. Older learners may be happier with printed materials or television; younger people liking high-tech ones, will like computer-based learning and multimedia. Audio-book has always been a popular medium among blind students because only this kind book helps them study without other people's assistance.

Physical access: Audio books are easier for blind students to get access to than others. For instance, learners may need to make a journey (and possibly an appointment) and the place and times may be inconvenient for them but more and more people have a tape or CD player at home, or can get access to one if necessary. Most people have their own audiocassette player, some have one in their cars as well as at home.

Convenience in use: Few media can be superior to a book in terms of convenience in use, but audiocassette player is very user-friendly. Indeed, learners can study the material at any time they choose; stop and start the sound whenever they want; replay a passage as many times as they wish; and skip over any material they do not need.

Necessary learning skills: Different media require different learning skills and different attitudes. For example, audio books require blind students to be good listeners. Learners have positive attitudes toward to media. But sence some tools are used to in entertainment situations it often limits their appeal for study purposes. Naturally, most learners can acquire the necessary skills and attitudes, if they wish. However, we have to make sure that it will be worthwhile given the time they have available for course or program they are working on. Clearly, an audio book can provide relief for learners who are not too keen on reading. We may need to support it with printed materials to help this particular group of learners develop the skills for using the audio medium effectively.

Your skills and know-how: As a trainer and/or teacher must have the know-how and skills, they need to use the medium effectively. Moreover, they have to know enough about the teaching capabilities of audio books to design effective materials. Finally, they must have the technical skills needed to produce and also deliver these materials. An audio book is somewhat more demanding than printed materials for blind students. Most teachers and trainers are already familiar with what it can deliver and will rapidly acquire the know-how and skills to design effective teaching methods and even to produce usable cassettes that can be used effectively. Instructors can remain in control of the medium.

Integration with other media: Some of the high-tech media relate uneasily to other media. Either because their producers believe that chosen medium can do everything by itself or because producers of other media sources are unsure of what the high-tech media are doing, so some resources can get sidelined. An audio book can be connected closely to other media. They can be used in class as well as for individual learning, and learners can (and often should) use them to complement the Internet and computer-based learning and their practices.

Can we afford it? Apart from printed material, no medium will cost less to use than an audio book for both the instructor and the learners. Designing effective audio takes no more time than writing a book and producing an audiocassette needs negligible investment in equipment compared with video and/or computer-based packages (an audio package might cost between one sixth and one tenth of a video on a similar topic). Learners are equally fortunate. They do not have to buy or rent expensive equipment themselves; nor do they incur costs and waste time traveling to a center to use someone else's (Kurubacak and Yuzer, 2004).

An audio book seems to have some special practical advantages. Therefore, audio books are better educational tool than other media resources (Rowntree, 1994, p. 10):

- To provide *aural source material* e.g.: A conversation with a client or colleague for the learner to analyze or react to
- To bring ideas into life presented elsewhere in the course
- To talk with learners through tasks during which it would be disruptive for them to keep consulting by means of written guidance
- To help learners practice skills
- To make teaching more human and personal
- To be expressed very easily
- To encourage or motivate learners
- To influence learners' feelings and attitudes
- To get valuable contributions to teaching from people who would be unlikely to contribute by means of writing
- To let learners hear the voices of experts, users, clients, other learners, etc.
- To present new ideas to learners who are unable or unwilling to read or whose circumstances prevent them from reading
- To provide necessary variety in learners' learning
- To act as a trigger for group sharing of ideas and experience

Some audio books use audio simply to give guidance and reinforcement by leading a tutoring and/or coaching package (Rowntree, 1994, p. 22-23):

- Instructors talk to their learners rather than expressing their teaching points in writing.
- While they are listening, teachers may be getting them to turn the pages of a workbook, which you have laid out with text and pictures (similarly, they may be operating a piece of equipment or handling real objects).
- Anytime the instructors will ask their learners (on the audio book) to answer questions and/or carry out some exercise perhaps writing their answers in the workbook or doing something with equipment they are working with.
- Each time set such for an activity, instructors will say "Stop tape now, and start it again when you have finished…" Instructors may record a tone or a few seconds of music at this point, as another signal for the learner to switch this device off.
- When learners switch this device on again, they hear the teachers' feedback and comments on activities. Instructors will talk about the kind of results they must have come up with. Or, if they're not the kind of results that can easily be described in words (e.g. diagrams or complex calculations), they may direct their learners to a page in the workbook where the instructors' sample answers have been printed.
- Having finished commenting on the previous activity, instructors go on to the next teaching point they want to talk about, as in 1 and 2 above.
- The learner carries on working with the tape guidance, even when the cassette player is switched off: "20 minutes of tape time might provide for an hour or more of learning time."

Audio-books can be used in open and distance education in different ways; for instance (Rowntree, 1994, p. 25):

- Instructors may want to record a commentary or study guidance for many set books or other sources your learners are using.
- Tutors and distance learners may sometimes choose to communicate with one another using cassettes as well as, or instead of, by sending letters or phoning.
- Your learners may be interested in recording their own ideas about certain topics as a way of preparing for the exams.
- Instructors may want to try an evaluation technique and ask distance learners to interview themselves, talking about responses in an evaluation questionnaire into their own tape recorders.
- Audio may also be used for assessment purposes, if instructors get learners to record examples of their work (e.g. foreign language speaking) or their reflections about some other project they have been engaged in.
- Organizers in open or distance education program can consider sending round a regular "audio-newsletter" cassette to keep both learners and their supporters aware of what is going on in the system.

Audio-books formats
In audio books, besides a professional narrator, there must be music and sound effects as well. Structured format elements in audio-books to help blind students are listed below (Ozgur, 1999):

Presenter or Teacher Talking Directly: Subject taught in this format is given in the style of direct talking by a presenter or teacher. In this format, attention should be paid to the fact that there is only one subject to be taught and which is supported by means of music and sound effects. In presenter/teacher format, presenter-teacher is the voice and personality in the program. Teacher-presenter must influence learners/listeners by means of his/her tone of voice, style of talking, reliability, intimacy but not physical properties and (the most important this is flat) s/he must be convincing establishing emotional relations with students.

Dialogues: Radio education programs presented to students are given by using characters' voices with the help of radio playwright who write about the subjects to be taught.

Testimony: Radio is a personal media. In general, students are alone while they are listening to the radio. Sometimes, the point of teaching can be told with those people testimonies related to that subject. In other words, when real people talk about their experiences, students can realize learning.

Story: Radio education programs narroting a story are realized with help of a story, which has a beginning, development and ending; such as radio phonic plays. Drawing listeners' attention to a story's development, educational goals and/or subject is presented to students in a program whom a story is resourced from the teaching subject itself.

Recorded Programs: Recorded programs are prepared in advance, cover certain periods and designed in units and involve music and sound effects. Sometimes, converting TV-based education programs to radio-based education program technology also contributes to support subject taught on TV by radio. The advantages of recorded programs are that they are creative and they can be controlled in each phase of their preparation.

Audio Books and the Condition of Blind Students in the Open Education System of Anadolu University
The Open Education System of Anadolu University has been providing higher education opportunities through distance education for many people not only in Turkey but also in Western Europe and the Turkish Republic of Northern Cyprus with its certificate, associate degree, degree completion and bachelor's degree programs since 1982. Besides, it has an important role in overcoming the educational problems of Turkey and raising the educational level of Turkish people through special projects. Celebrating its 25th year in the 2006-2007 Academic year, Open Education System of Anadolu University today is one of the mega universities in the world with its 7 bachelor's and 20 associate degree programs offered by its three faculties and with approximately 1 million and fifty thousand students and 900 thousand graduates. The number of the students in the Open Education System is 43,2 percent of the total number of students in higher education in Turkey. 633 of these students are handicapped and 283 of these handicapped students are blind. The Open Education System is composed of printed course books, TV programs, academic counseling services, video conference, computer/Internet based educational applications and student support services. All of the students benefit from these resources in the light of the principle of equal opportunity. Unfortunately due to their handicap, the ability of the 283 blind students who study in the Open Education System to benefit from the offered learning opportunities is very limited. Therefore, audio books have been producing since 2004. The audio books liberate the blind students from the necessity of studying with someone else and help them to be more succesful by providing with this unique resource to understand their courses better. The production of the audio books for the students who are blind and will profer to study by listening the course books started in 2004. The audio books which were selected from the courses from which the blind students can benefit most. The audio books of 14 courses in which the student number is maximum and shown in the Table 1 are produced and more than 21 books of the process of recording are still available (Table 2).

COURSES	Audio Books	Overall Students
Introduction to Ecenomics	📼	172
Introduction to Business	📼	153
Introduction to Behavioral Sciences	📼	143
Introduvtion to Law	📼	136
Basic Information Technologies	📼	121
Introduction to Accounting	📼	88
Atatürk's Principles and History of Turkish Revolution	📼	70
Economic Theory	📼	41
Public Finance	📼	39
Management and Organization	📼	30
Financial Management	📼	20
Management Information System	📼	12
Government Budget	📼	11
Turkish Political History	📼	7

Table 1

COURSES	Overall Students
History of Civilization	53
Commercial Law	38
Persuasion and Conversation	20
Applications and Cases in Public Relations	20
Institutional Communication Management	19
Public Relations	18
Public Relations Application Techniques	18
Human Resources Management	18
Public Relations Authorship	16
Marketing Management	12
Strategic Management	12
Auditing and Applications in Economics	11
Capital Markets and Financial Institutions	11
Entrepreneurship	11
World Economy	11
Administrative Law	10
Turkish Economy	7
Local Governments	7
Political Science	7
Organizational Behavior	6
Turkish Language	6

Table 2

These courses are Introduction to Business, Introduction to Behavioral Science, Introduction to Economics, Introduction to Law, Public Finance, Atatürk's Principles and Turkish Revolution History, Government Budgeting, Management Information System, Management and Organization, Introduction to Accounting, Economic Theory, Basic Information Technologies, Financial Management and Turkish Political History. Furthermore, these audio books are converted to MP3 format and delivered on the Internet. This service is beneficial not only for the blind student but also for other students in Distance Education System. They can download the audio books in MP3 format via the Internet to their own computers and use the books to help them to learn more effectively. That is to say that, in the production of audio books for the blind students access properties of the students to the books, convenience to the needs and expectations, Internet usage, educational aims, CD and MP3 possession, production formats and technical features are considered. The usage of the audio books delivered on the Internet in the years are featured in the Table 3.

e-Audio Book		
Year	Number of Students	Number of Benefit
2005	16.789	52.618
2006	68.461	232.100

Table 3

The process of audio book production in the Open Education System of Anadolu University consists of pre-production, production and post-production steps, like any audio, cinema and television program productions.

Pre-Production: In the beginning, to verify courses with audio books, the number of the disabled learners in the Open Education System of Anadolu University was determined. This research was conducted on the demographic, psychological and social backgrounds of the blind students, and the communication tools they have. Research on how audio books support student learning can be carried out in the future as this was seen to be a weakness at the beginning at this project. In the Open Education System of Anadolu University, the books consist of units (chapters). Therefore, every unit can be accepted as an individual module in the process when audio books are produced. The books will be recorded as a direct lecture with the readings from different narrators. Music and sound effects will be mixed in the appropriate parts. The parts in audio books (title of the unit, its number, its objectives, pre-test, introduction, text, summary, self-test, through life, sample events, a self-test key) will get ready one by one individually. No special text will be written for the audio books.

Production: To produce audio books, a professional sound recording studio is needed. In the Open Education Faculty Radio & TV Production Center of Anadolu University, the sound studio that is equipped with professional recording machines with a soundproof technology. While recording audio books, the learners and educators from the State Conservatoire Theatre of Anadolu University will collaborate with the researcher in this study. To avoid waste of time, rehearsal will not be carried out in the studio. They will be recorded as a computer based digital audio recorder workstation system, and they can be changed to every format wanted. It will approximately take one month to record a book. Units are regarded as individual programs while recording audio-books. The audio books in the Open Education Faculty are approximately fifteen units, and these books are around 300-350 pages long. Each unit is about 20-25 pages. It will take seven days to record each unit, and a month to produce an audio book.

Post-Production: This montage step is mixed and matches with musical and natural sounds. Each unit has 20-25 pages long, and a 45-90 minute-program. Each audio book is a approximately 10-16 unit-book, and produced on CD ROMs and adapted to the Internet (Table 4).

Determinig the books which will be converted to Audio book format
Organizing the book-writer team
Determinig the vocalization artists
Test recordings
Determinig the CD Content
Receiving feedback
Organizing the sound recording and montage team
Production
Post-Production (Montage)
Converting the master Audio-CD's to MP3 format
Copy and Broadcast

Table 4

Problem
It has become compulsory to prepare more original educational materials for the learners according to the variety of communication means. Especially, designed course materials cannot be provided to those blind students who register in the Open Education System of Anadolu University. These students particularly cannot benefit from the books without other people's help while they are studying. In fact, the main part of creating an equal learning environment in education is to provide blind students in the Open Education System with audio books, so that these students will become independent individuals.

It is a necessity to evaluate the audio books produced at Anadolu University Open Education Faculty in the 2004-2005 Academic Year with a formative approach considering the student's opinions, re-formulate more effectively considering the educational aims of the program and student's requests and to overcome the problems and deficiencies. Therefore, the purpose of this study is to investigate the opinions related to the audio books specifically designed for the blind students studying at Anadolu University Open Education Faculty to make their self-studying easier.

Purpose
The purpose of this study is to reveal what the blind students think about the audio books which have been used since the beginning 2005 in Open Education Sytem. To achieve that purpose, the opnions of the blind students were gathered and the following issues were questioned:

- the state of making use of any audio books prior to Open Education Faculty
- the types of studying methods prior to the audio books of Open Education Faculty
- the level that students can reach in the learning process of a certain school subject prior to Open Education Faculty audio books
- Determining how the audio books affect the studying and learning performance of the students
- Revealing any advantage and disadvantage of OEF (Open Education Faculty) audio books with regards to the studying environment
- The problems experienced in the availability of the units in the OEF audio books
- The comprehensibility of the verbal explanations of the tables, graphs and formulas in the OEF audio books
- The contribution of the music and audio effects to comprehensibility of the books
- The state of the OEF books' being produced or not in MP3 format
- Gathering the opinions related to whether the audio books should be broadcasted on radio or not

Limitations
This study is limited to 283 students studying at Anadolu University between 2005 and 2006 and also limited to the audio books prepared for only 14 different subjects.

Significance of the Study
This study is very significant as it will help the blind students at Anadolu University, Open Education Faculty benefit from the audio books more effectively and fruitfully, produce books of better quality and serve as reference books for the students and academicians.

METHOD
This study, which is designed to investigate the audio book projects prepared for the blind students at Anadolu University is a descriptive study which aim to describe an existing case. The data in this study was collected through **interviews (derinlemesine görüşme)** method, which is a data gathering technique based on verbal communication, a qualitative measurement. The interviews were carried out through telephone and face to face interviews (Karasar 1991, 166).

Research Model
This study, in which qualitative research model is used, aimed to investigate how and to what extend individuals benefit from the audio books in their natural environments. The qualitative data of the study was gathered through the use of open-ended interview technique which is a toopic centered interview method. In the qualitative study, data was gathered through the use of one or at least two of the following methods; interviews, field notes, observation, personal or official records and investigation of the documents (Bogdan and Biklen, 1998). The standart open-ended interview technique is an interview technique in which participants are available just for once and they are available to participate in the study periodically through the research (Patton, 1990). The interviews which are also a data gathering method in this study were conducted on each participant without reconstructing the questions, following the same order for all participants. No guidence was supplied for the participants and also it was made possible for the participants interviewed to answer the questions as they wish, without any word limitation (Bogdan and Biklen, 1998).

The Participants
The study was carried out on the blind students at Anadolu University, Open Education System. The scope of the study consists of 283 blind students studying at Anadolu University, Open Education faculty between 2005-2006 education year. Table 5 shows the distribution of the students studying at Anadolu University, Open Education

Faculty depending on their departments and faculties. The sampling of the study consists of 30 students randomly chosen out of the 283 students.

		Blind Sudents
OEF	Program in Banking and Insurance	
	Information Management	
	Office Management and Secretarial Training	3
	Office Management	
	Foreign Trade	1
	Home Management	8
	Public Relations	69
	Theology	14
	English Language Teaching (Ankara)	1
	Laboratory Assistants and Veterinary	1
	Accounting	4
	Pre-School Education	5
	Occupational Training Program for the Police Force	1
	Health Related Professions	4
	Social Sciences	19
	Tourism and Hotel Management	
	Local Governments	7
ECONOMICS	Labour Economics and Industrial Relations	5
	Economics	6
	Public Administration	84
	Public Finance	8
BUSINESS ADMINISTRATION	Business Administration	43
	Total	283

Interview Tool
The interview instruments of this study consist of face-to-face interviews and interviews through telephones. The interview was conducted with three participants living in Eskişehir and the other 27 participants were interviewed through telephones. The participants were chosen randomly from different parts of Turkey and one participant was chosen from North Cyprus. The questions asked to gather data were prepared under the supervision of the field experts and in this way the comprehensibility and reliability of the questions were confirmed. After a pilot study, the data of this study was gathered after the interviews conducted September 2006. All of the interviews were taperecorded and then the obtained data was analysed and discussed considering the responses of the participants to the addressed questions. The tables recording of the interviews were carried out with the use of DAT (Digital Audio Tape) recorder and then these recordings were transfered to a computer. The recordings of each individual were seperated from one another in computer and then they were grouped and the main themes were determined according to their responses.

FINDINGS AND DISCUSSION
10 questions in total were prepared for the purpose of determining how the blind students at Anadolu University, Open Education Faculty perceive the audio books. The data was analysed reserving the order of the questions as they are with the use of qualitative analysis method.

The first question that was addressed to the students in the study was "the state of benefiting from any audio books prior to the Open Education Faculty". When the responses taken from the participants were examined, it was found that more than half of the participants stated that they had never benefitted from any audio books prior to the Open Education Faculty audio books. The most basic reason for this is that the number of the materials for the blind students are very limited and the available materials can be said to be printed in Braille alphabet. Students suggested that having no audio books for the blind students prior to the Open Education faculty audio

books led students into many problems related to studying. Therefore, the audio books prepared by the Open Education faculty were perceived to be innovative and create a different studying environment by the students.

The second question addressed to the students in the study was "what were your studying strategies prior to the Open Education Faculty audio books?" When we examine the responses to that question, we found that most of the blind students got help from a volunteer reader in their studyings prior to the Open Education Faculty audio books. These volunteer readers are generally relatives of the blind students with insufficient education causes some problems like reading books with an appropriate, comprehensible and fast and adequate pronunciation. Moreever, the blind students have to schedule their studying times to accomodate the volunteers's availablity. The other blind students in the study were found to use computer supported book-scanning method, to listen to visual CDs of Open Education Faculty, to attend private courses. The ones who newly registered to Open Education System stated that they benefit from the audio CDs that were sent to them by OEF. One participant in the study stated that he had no eye problem when he started OEF and lost his seeing ability as a consequence of an accident and as a consequence of that he stated that he benefitted OEF audio books.

The third question in the study is "the degree of learning a certain subject prior to the OEF audio book" The responses to this question vary. Almost all of the blind OEF students participating in the study stated that their learning degree prior to the OEF audio books was worse than now and was also very limited. They also stated that their learning of school subjects improved after OEF sent them these audio books. We can easily say that, in this system, students have the opportunity to schedule their studying as they wish and also have the chance to follow this schedule without any delay. Blind students can improve their learning by scheduling their studying time, their studying periods and their attention, by organizing their studying athmosphere and their motivation to study. Moreover, they can relisten to the units that s/he cannot comprehend or that s/he considers as to be important. These students have the opportunity to listen to the audio books again and again which can help students to store the learned items in the long term memory very easily, and thus, the intended learning takes place. Moreover, these students are aware of the fact that they are taken into consideration through the audio books production by the system, was found to have given extra motivation to the students in their learning.

The fourth question of the interview is "how do the OEF audio books affect their learning". Almost all of the blind students in the study suggested that the OEF audio books affected their learning performance and improved it for the better. Indeed, audio books motivate students for studying and make them more independent and help them learn on their own.

The fifth question in the interview was "what are the advantages and disadvantages of the audio books with regards to studying environment". According to the responses tied with this question, it was found that the method that they used prior to the audio books was to get help from a volunteer reader. With the help of these audio books, they no longer need someone else's help in their studying and they have the opportunity to study wherever and whenever they want, without any time limitation, and also they can listen to the books through headphones without any disturbance from the outer world. Moreover, the students with limited eye problems stated that they could study without tiring their eyes, without using any magnifying glasses, without scanning the books with the use of computer supported instruments. Taking all these comments into account, we can state that audio books offer great contributions to students' success.

The sixth question in the interviews was "what were the problems that they experienced in finding the subject that they want" All of the blind students participating in the study stated that they had no problem in finding the subject that they need in the audio books. Organizing the audio books into many sections (tracks) helped the students find the subject they wanted. However, students experienced some problems with the delivery of the audio books and having no manual specially designed for them can also be counted as being one of the problems. The number of students who have insufficient internet access and the limited number of students who do not have VCD players were found to be some other problems that students experience.

The seventh question in the study was "what is the degree of the comprehensibility of the graphs, tables and formulas in the audio books". As the majority of the participants consider the graphs, tables and formulas as sufficient in the audio books, they are exempted from such questions and therefore they do not consider these points to be significant. There is a significant difference between those students who are born blind and the students who lost their visual ability later. Those born blind stated that any relief designs and models would be more benefical for them if any physical touch is made available. However, it is compulsory to employ newer practices in the teaching of graph, tables and figures.

The eighth question in the interview was "what is the contribution of music and audio effects to comprehensibility?" All of the blind student participating in the study stated that the audio and music effects in the audio books made it easier for them to comprehend the audio books and also they reinforced some parts that they consider to be important.

The ninth question in the interview was "what is your opinion about whether the audio books are in MP3 format or not". When we examined the responses given to this question very carefully, we found that using MP3 format in the OEF audio books was considered to be appropriate by the blind students. They stated that MP3 format covers less place on CD and also they can benefit from it more easily. It was concluded in the study that there is no need for any other formats but MP3.

The last question of the interview was "what are the opinions of the blind students about the broadcast of the OEF audio books on radios simultaneously". As most of the blind students at OEF stated that broadcasting the audio books on radios might be beneficial. They also added that they were delivered the audio books, they could listen to them whenever they want, they have to spare extra time for radio listening and they may have the risk not to listen to the radio. Another criticism to the broadcast of the audio books on radio is that the units in the audio books are too long. As a result, following the broadcast without any break may cause some perceptioanl difficulties.

CONCLUSION
This study aimed to reveal how audio books at Anadolu University, Open Education Faculty are perceived by the blind students. The data obtained from the participants suggests that audio books were used to study by the blind students for the first time, that they helped them gain their independence when they need to study and continue their learning individually, that they could have the opportunity to study lessons whenever and wherever they wished and that they could improve their learning capacity. We have to be reminded that the audio books are in plain speaking format, therefore, all of the books are monotonous, and that they take too long time (a book takes 4-5 hours to finish), that they have no manuals. All this make it harder for students to benefit. Moreover taking into consideration that access to audio books is available on the Internet for free, but sending these books to students in CD format appear to be problematic. Furthermore the number of the students who have Internet access is limited and that the number of students having CD player at home is also restricted. Hence we should evaluate these difficulties. New regulations should be done for copying the audio books in CD and cassette format to make then available for more students.

It is a well-known fact that the number of audio books is limited when we consider all the subjects covered in the Open Education System. Therefore, more audio books should be produced and some audio books should be produced in different formats. For example, **dramatic expression** format, **an illustration from real life** format may be more interesting and didactic compared to those of flat expression. However, producing books in these formats also brings some difficulties with regards to cost and time. The interaction between student to content, student to student, student to instructor, and student to institution in a Open Education System makes learning easier. However, audio books never give chance to interaction. As the broadcast is available only on the Internet, students may be supplied with interaction which is not synchronic between students and institution. That there exist no interaction opportunity in audio books can be suggested to take blind students away from the learning environment.

Parallelly to updating the books in the Open Education System, the audio books should also be revised, updated and students should be supplied with newer audio books with new information. To achieve all of these require a careful planning. Audio books are one of the best learning tools which can be used as mobile learning environment. Students should be encouraged to listen to the audio books through some portable instruments like MP3 players and cd player whenever and wherever they wish. The audio books are the best learning tools for the blind students with regards to sound quality, the accurateness of the information and accurate pronunciation. In audio books, some sound effects and music effects should be used to get students' attention to some parts. These help students develop concern and wholeness related to particular subjects. The production of audio books means reading the whole audio book. However, students demand shorter materials which include summary parts.

Although students have negative opinions related to the broadcast of the audio book on radio, broadcasting these audio books on radio periodically, carrying out the radio broadcast on the Internet will be perceived as novative by not only Open Education Faculty students but also by all the blind students themselves. It is a well-known fact that some of the students at Open Education System do not benefit from audio books equally. However, the continuous increase in the number of students, the developing technology, the financial inrease for the students

to be able to buy the technology and the variety of the subjects and programmes, demonstrate the need for a structural change from own behalf.

In conclusion, each of the communication technology in the field of open education in the world and teaching environment have a positive contribution to teaching-learning process. Therefore, the effect and function of the instruments in the learning process, is to benefit from them in such a way that they complete each another. As long as they supply interaction, the effectiveness and fruitfulness will increase in education. The audio books used in Open Education System provide the blind students with new and different learning environments and opportunities. As they are produced and tailored for the personal differences of the students, it helps Anadolu Univertity increase its positive image in the public eye. The production of audio books helps more blind students benefit from education opportunities. This in itself it is considered to be very significant. After the release of the audio books, the number of the blind students who registered to the system increased. Consequently, audio books are very important for the visually impaired students to benefit from higher education opportunities. New studies should be done to enable not only the blind students but also all the other students to benefit from the audio books and provide more usage of these books by students.

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