The growth of iRadio OUM as a quality audio learning material provider

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Abstract

Purpose – The purpose of this paper is to discuss the progress of iRadio OUM over the years, the evolution of technology used and its overall significance to OUM's continual growth and development.
Design/methodology/approach – Reports the results from web analytic data from previous years in terms of listening and downloading habits and trends. Reviews of how other institutions and/or organisations use podcasting or audio learning material in the teaching and learning process are also included.
Findings – Outlines the progress of iRadio OUM through the years in terms of content development, listening and downloading trends as well as research and development carried out. This paper summarises the changes in how segments are structured, produced and delivered. It also outlines the evolution of the technology used, mainly in terms of how content is delivered to the audience.
Research limitations/implications – The scope of the paper is such that it only highlights the experiences of iRadio OUM alone.
Practical implications – Offers practical advice in terms of the planning, development and implementation of an educational internet radio for higher learning institutions.
Originality/value – This paper is written by key team members of iRadio OUM itself and highlights the experiences and ultimately the best practices discovered by actual web-broadcast practitioners and audio learning materials instructional designers.
Keywords Mobile learning, Audio learning materials, Internet radio, Learning podcast
Paper type General review

Introduction

iRadio OUM began its initial broadcast in April 2007 and was established with the idea of addressing different learning styles. Focusing on audio learning materials, segments, capsules and audio books based on the modules the Centre for Instructional Design and Technology (CiDT) develops are produced and broadcasted daily, from 9 a.m. to 5 p.m. These audio files are later edited into podcast format and uploaded for audience to listen and download any time, at any place.

In its initial stages, iRadio OUM broadcasted mainly infotainment segments, highlighting current issues and events as well as useful tips for students. Broadcasts also include interviews with university management and faculty, introducing the university to the audience as well as explaining the functions of the various units.

Topics such as the use of the Digital Library, registration and payment of fees are the main focus of broadcast then. iRadio OUM was operated by staff of the CiDT, most of them multi-tasking the radio segment production with other job scope.

With the recruitment of dedicated iRadio OUM team in 2008, iRadio OUM began to venture into actually producing learning segments. Incorporating tested instructional strategies, the segments add value to the overall learning experience at OUM. Content from modules are chunked accordingly, given real life examples, made interactive with skits and discussion interviews with subject matter experts.

The development of iRadio OUM

The demand for open and distance learning is something that is growing steadily. The launch of the Malaysia Education Blueprint 2015-2025 highlights lifelong learning as one of the pillars in education, recognising the significance of lifelong learning as a pivotal component in nation building. One of the challenges faced by many open and distance education is learning materials development and delivery. iRadio OUM meets this core need.

Utilising online broadcast media is another effort by OUM to continue being in the forefront of quality blended learning provider. According to a study by the e-Learning Guild, the use of the blended learning method is preferred with 76 per cent of respondents citing that the approach is of more use than providing class alone, 73.6 per cent respondents agreeing that there is higher learner value and impact and 68.6 per cent learners prefer this method compared to other methods (Sparks, 2007).

The foundation behind a successful blended learning approach is the thoughtful amalgamation of different channels and media to deliver learning materials. Technology is arguably one of the most important resources in education. In today's age of information technology, any industry or organisation keen on maintaining a competitive edge has to fully utilise technology in all of its operations, especially for learning institution.

A central technology in use for at iRadio OUM comes in the form of podcasts. A podcast is audio content available on the World Wide Web (Ibrahim *et al.*, 2009). Audiences are able to subscribe to regularly updated podcasts and listen to the podcasts when it suits them, either by downloading the content into their mobile devices or streaming the content via the internet. Although the term "podcasting" can trace its origins to iPod, the popular digital music player from Apple (Jennings, 2004), the technology of podcasting is not limited to Apple devices alone. In fact, any smartphones or media players with internet access available today can play or stream the podcasts files. How podcasts are distributed is its key characteristic. Audience can choose to subscribe to the podcasts, either by using built-in media player, such as Apple's iTunes or using RSS (really simple syndication) feeds where subscribers are sent the new files when it is updated.

Audio learning material can be a useful tool in teaching and learning because unlike your eyes, you cannot exactly shut your "earlids" (McDonald *et al.*, 2000; Wickens *et al.*, 2000). With the correct instructional strategy, audio files in learning can be applied to both gain learners' attention and also to help focus that attention on appropriate information and engage as well as sustain learners' interest over time (Bishop and Sonnenschein, 2012).

A research carried out by Duke University explored the use podcasts in learning in depth. In 2004, the university provided first-year students with iPods "to encourage creative uses of technology in education" (Ibrahim *et al.*, 2009). From the study, some notable results when it comes to using iPod in learning activities include learners using the podcasts as "course content dissemination

tool: portable access to content […] distributed in various ways, including podcasting" as well as a "[…] study support tool: repeated listening and repetition of audio content" (Belanger, 2005).

Other benefits of using podcasts were also highlighted in the Belanger's (2005) report. One of the advantages noted is how podcasts enhanced the mobility of the learning materials. Learners have the choice of where and when to listen, affording them the opportunity to go through the materials anytime, anywhere, be it for a quick revision or deeper understanding. Also reported is how the podcasts enabled the student to no longer be hindered in terms of physical learning materials such as textbooks as well as be restricted in terms of the location and opening and closing hours of labs and library facilities.

The use of podcasts in teaching and learning, especially in open and distance education is ripe with potential. With the correct instructional strategies and approach, podcasts or audio learning material offer flexibility to learners in terms of study time and place, better access to learning material as well as addressing the needs of learners with different preferences when it comes to learning styles. Thoroughly explored and well-developed, using podcast in educational setting can be truly beneficial to both learners and learning institutions.

Types of segments
As more e-learning materials are made available in OUM, iRadio OUM explored the possibility of functioning more as a campus radio rather than a full education-based radio station. Segments developed are now inclusive of edutainment segments and most of these segments aim to enrich the audience's knowledge and day to day life. Segment such as Eco Hour aims to foster awareness on environmental issues. This segment features interviews with OUM's Chancellor, Tun Jeanne Abdullah, who is very passionate about the environment and is the chairperson of Landskap Malaysia as well interview with Hajah Zainab Mohd Ghazali, Director of the Physical Planning Department, DBKL on their River of Life initiative.

The broadcast schedule for iRadio OUM is based on university semesters. New broadcast schedule usually commence late January, May and September. Each broadcast schedule will run throughout the semester with ten segments produced for new each programmes. Below is a sample of the broadcast schedule (Figure 1).

Every broadcast schedule consists of several important elements. One is the "learning segments". These 30 minutes to one hour long segments provide value-added learning materials for the learners by inviting subject matter experts, module writers as well as moderators. These guests are invited to highlight aspects within the modules that otherwise might not have been covered in their tutorials (Ibrahim *et al.*, 2009).

iRadio OUM also broadcasts segments that highlights university events and updates, such as Open Days, convocation ceremony as well as interviews with OUM's top management, such as the Chancellor and the President and Vice Chancellor. These are the "campus radio" segments. Not only that, this category also includes interview sessions with prominent guests, usually academicians or education experts, from all over the world, who happens to be touring OUM. These segments are opportunities for them to share their expertise and experience with OUM citizens, staff and students alike.

Apart from that, iRadio OUM also produces edutainment segments as part of the broadcast schedule. These are segments loosely based on modules, focusing on one or two topics that the general public can relate to. For example, the segment *Inspired Parenting* focuses on early childhood education. This is one of the courses offered by

	ISNIN	SELASA	RABU	KHAMIS	JUMAAT
9.00-9.30	OUM Promos, PSAs and Music				
9.30-10.00					
10.00-10.30	Fiqh Munakahat	Talk to DNA	Inspired Parenting	Psikologi Pendidikan	Sejarah Pendidikan Islam-Ustaz
10.30-11.00					
11.00-11.30	Klik-Klik Minda	OUM Cares	Ergonomics	Meh Jalan-Jalan	Masyarakat and Tamadun
11.30-12.00		OUM Book Club	Workplace Safety		Malaysia Kita
12.00-12.30	Family and Community in Early Childhood Edu	Internet Marketing	Work of The Day	LearningMania	Prinsip Aqidah
12.30-1.00	Introduction to Psychology		Hortikultur		Prinsip Pengurusan Islam
1.00-1.30	Children Evaluation and Observation	Financial with AKPK	Inspirasi Wanita	Business Sense	Eco Hour
1.30-2.00					
2.00-2.30	Abnormal Psychology	Introduction to Communication	Gaya Hidup Sihat	Big Hearts	Let's Learn English (with Zack)
2.30-3.00	Sudut Kreatif	Care for Your Child	Effective Leadership		
3.00-3.30	Editing for Publication	eLibrary	Reading Time	Home Sweet Home	Music 101
3.30-4.00	Newswriting and Reporting				
4.00-4.30	OUM Promos, PSAs and Music				
4.30-5.00					

Figure 1.
January 2015
broadcast schedule

OUM and this segment focuses on parenting issues, such as gadget addiction, how early parents should start early childhood education and many more.

The breakdown of these segments is clearly balanced and addresses different aspects of a student's life, as seen in Figure 2.

Adapting to the challenges in the twenty-first century: the way forward
iRadio OUM itself started as just a web broadcast. It later evolved into a podcasting service when content is edited and uploaded onto the then iRadio OUM website. These podcast were uploaded based on the schedule and the podcasts were not categorised according to subject or faculty alike. Even the quality of the audio was not a priority due to bandwidth restraints.

However, with continuous research and development, iRadio OUM began to venture into a podcasting platform. This witnessed the birth of iCast (http://iradio.oum.edu.my/icast/), a dedicated website for audience to download the audio files. Further research and development during this time also resulted in the use of a different compression

Types of Segments

Campus radio
30%

Learning segment
30%

Edutainment
40%
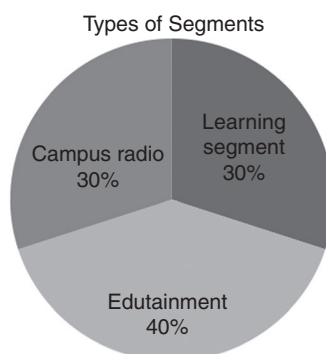
Figure 2.
Types of segments
on iRadio OUM

method to maintain the audio quality but minimise the file size. Not only that, iCast also incorporated subscription features, audience have the option of subscribing to iCast for free either via iTunes or RSS feeds.

Apart from just being delivered by its own platform via iCast, iRadio OUM podcasts called iCast, can also be found on OUM App (http://oumapp.oum.edu.my/) and OUM's iTunes U page. Not only that, as mentioned earlier, videos of interview segments held on iRadio OUM can also be viewed via OUMportal (www.youtube.com/user/OUMportal).

Trends in iRadio OUM

To observe the trends of iRadio OUM audience, an analysis was made of the number of visits to the website in January 2014 and January 2015. The aim of this observation is to determine whether the flow of visits has decreased or increased over the years. To track the usage of the audio learning materials produced, iRadio OUM deploys web analysis programmes, namely, Google Analytics (www.google.com/analytics/), Webalizer (www.webalizer.org/) and Get Clicky (http://clicky.com/). These analysis programmes track the number of listeners, where they are from, the number of files downloaded and other useful information that can help iRadio OUM to strategise and improve on its product.

To monitor the listening and downloading trend of iRadio OUM, an analysis was made of the number of visits in January 2014 and 2015. From Figures 3 and 4, the data tabulated by Webalizer indicates that the number of visitors has slightly increased. This may be caused of the exposure that OUM has had with the launch of its OUM App and OUM via iTunes U. From this data set, it can also be observed that traffic to the
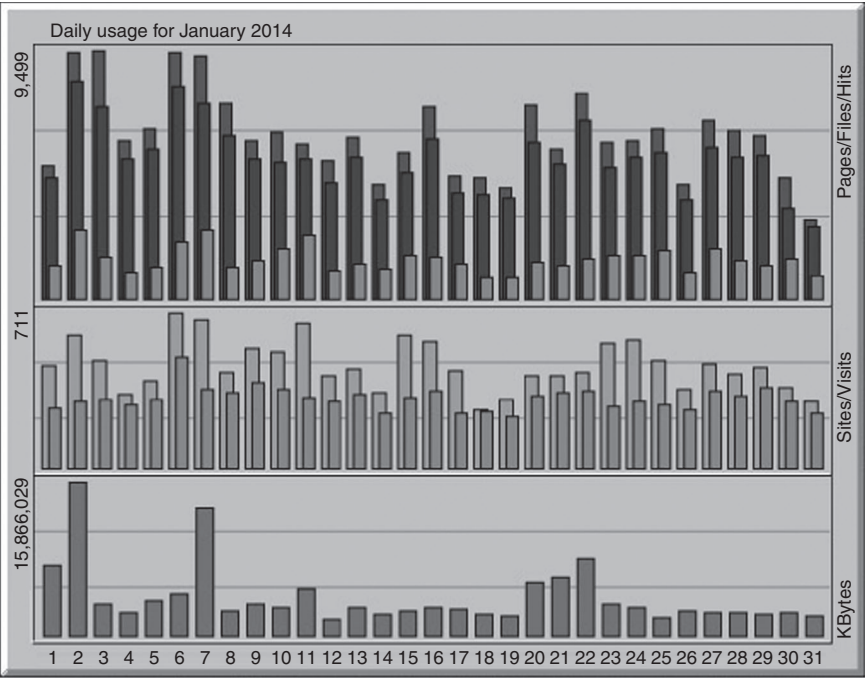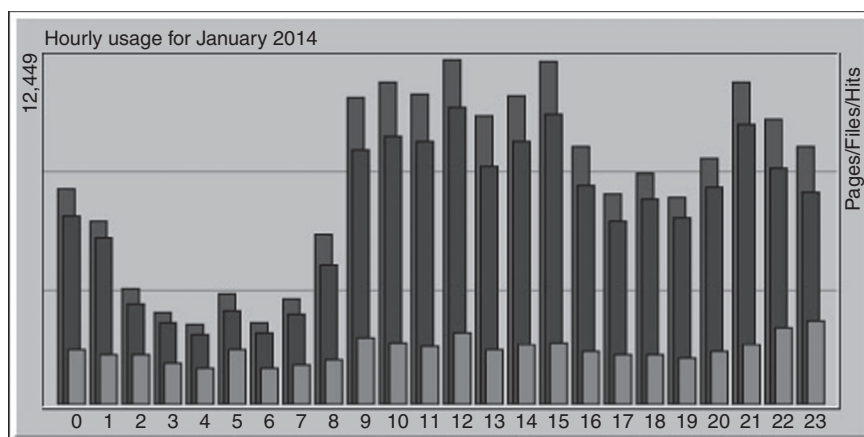

Figure 3.
Daily usage for January 2014
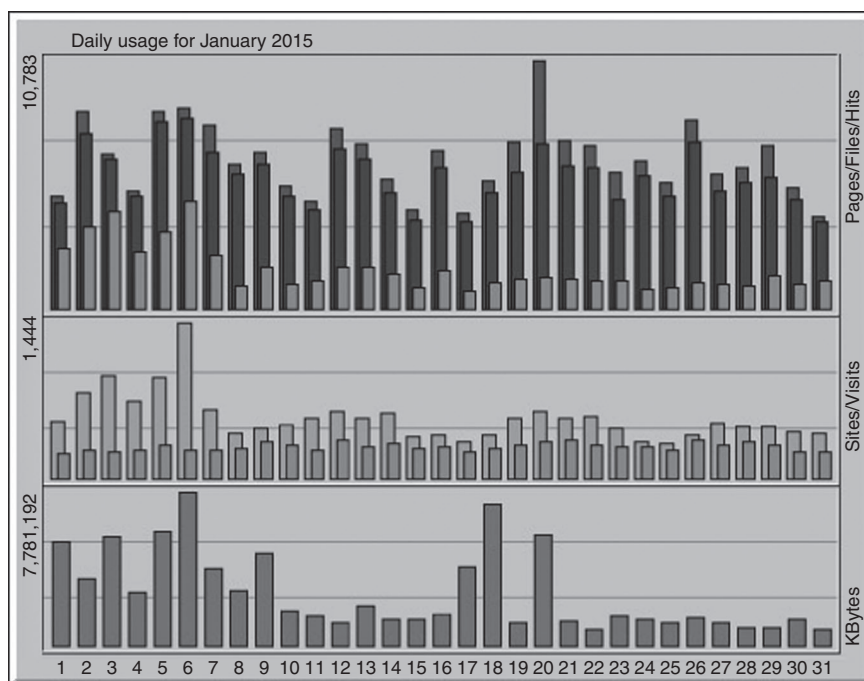
Figure 4.
Daily usage for
January 2015

website is high during the weekdays, especially on Monday and Tuesdays. This information helps iRadio OUM to identify what days to broadcast important segments to take full advantage of the high traffic.

As can be seen in Figures 5 and 6, iRadio OUM recorded the most number of listeners from 9am to 5pm. The highest number of visits occurs from 9 a.m. to 12 p.m. Over the time period observed, the amount of visitors during these peak hours has not changed significantly. This means that iRadio OUM can still place most of its important and interesting segments in the peak time slots. Also worth noting is that

Figure 5.
Hourly usage for
January 2014

Figure 6.
Hourly usage for
January 2015
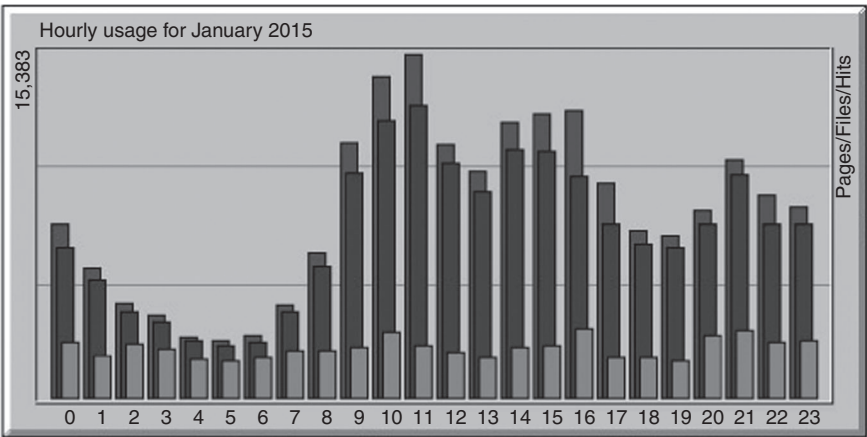
even after the live broadcast hours, i.e. 5pm onwards, the website still receives visitors and the activity during these hours are noted to be mainly downloading of audio files. This data helps monitor the impact of activities such as promotional events and special interviews, on the number of visitors and/or listeners to the website.

Table I summarises the number of visits, the total size of files being downloaded and the estimated number of files downloaded from January 2014 to January 2015. This data helps iRadio OUM to determine how best to best strategise the development of iRadio OUM. From Table I, we can depict the trend as seen in Figure 7.

From Figure 7, there is a high number of visits in the months August 2014 and December 2014. These months are peak months for the university's marketing efforts because the marketing team is trying to boost the number of new students for that semester.

iRadio OUM also uploads our podcasts to OUM iTunes U. To date, 42 titles have been uploaded and the response has been encouraging. From Figure 7, the "English for Oral Communication" podcast collection has the highest number of downloads so far, with more than 3,000 downloads in less than six months (March to September 2015). iRadio OUM plans to continue uploading our content on this platform and making it available to the public for free, as part of OUM's open educational resources (OER) efforts as well (Figure 8).

Month and year	Total monthly visits	Total download size (MB)	Estimated no. of file downloaded
January 2014	14,479	123,534	6,863
February 2014	14,103	56,695	3,149
March 2014	17,052	72,775	4,043
April 2014	15,864	98,104	5,450
May 2014	13,426	65,315	3,628
June 2014	12,407	47,476	2,637
July 2014	17,103	42,129	2,340
August 2014	18,302	55,587	3,088
September 2014	16,887	83,871	4,659
October 2014	15,885	85,949	4,775
November 2014	16,540	81,250	4,514
December 2014	18,837	84,938	4,719
January 2015	17,256	82,679	4,593
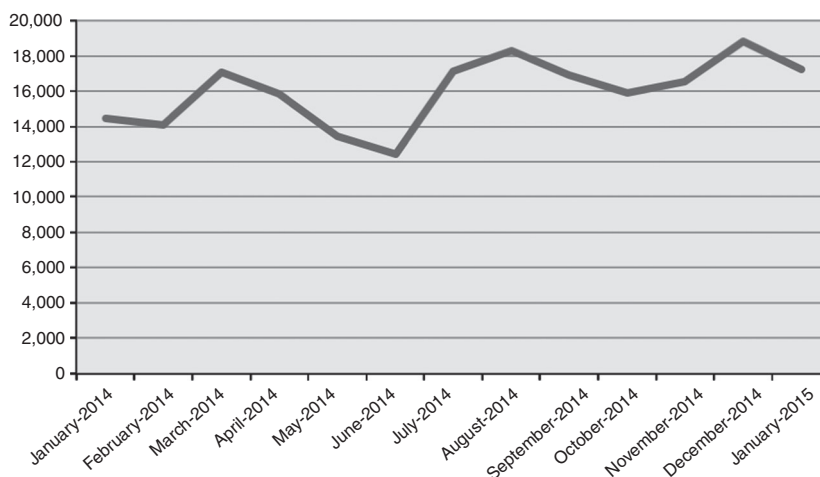
Table I.
Monthly usage
statistics

Implications and the way forward

Data from this research study suggests iRadio OUM the improvement that can be implemented. Some of the strategies incorporated are:

- Adding more interactive elements such as interviews with subject matter experts as well as exploring the use of video to enhance the day-to-day broadcast. iRadio OUM took a step further by also video-streaming these live interviews, enabling learners to view the video which will also be uploaded to OUMportal, OUM YoutubeEdu channel (www.youtube.com/user/OUMportal).

- Creating the "interactive" playlists via OUMportal specifically for iRadio OUM content. A total of 283 videos are uploaded thus far, ranging from interviews with lecturers on highlights and difficult concepts from the modules as well as with OUM's management and related units on university-related matters.

- Developing more segments in English as iRadio OUM has had visitors from 124 different countries. These learning materials or segments should also be more universal in nature, something that the general public can relate to, instead of a very technical and narrow discussion of a subject.

- The learning materials developed has to be of good quality as it carries the OUM name and brand onto the world stage.

Conclusion

iRadio OUM plays an important role in developing e-learning materials for OUM. It adds value to the printed modules and addresses the different learning styles or preferences of the learners. Auditory learners may benefit greatly from the audio files provided and visual learners can truly take advantage of the videos uploaded via OUMportal.

iRadio OUM has moved to be more than just a web radio platform. All the learning materials developed via iRadio OUM is also repurposed and incorporated into other OUM's e-learning platforms, such as myVLE, OUM App and OUM iTunes U. This is also part of OUM's OER efforts as all of the content uploaded is available for free.

Top Collections	01 March 2015-10 September 2015	Downloads
(Podcast) English for Oral Communication		3,019
(Podcast) English for Workplace Communication		1,166
(Podcast) Introduction to Psychology		711
Child Psychology		708
Principles of Behaviour Modification		699
(Podcast) Thinking Skills and Problem Solving		699
Educational Psychology		697
(Podcast) English for Written Communication		696
Guidance and Counselling		553
English for Science and Technical Purposes		511

Top Items	01 March 2015-10 September 2015		Downloads
Episode 1 – Communication: An Overview (Podcast) English for Oral Communication			676
Episode 2 – Oral Communication: Some Basic Pri... (Podcast) English for Oral Communication			330
2 – Oral Communication: Some Basic Principles English for Oral Communication			292
Episode 3 – Active Listening Skills (Podcast) English for Oral Communication			280
Episode 8 – Public Speaking (Podcast) English for Oral Communication			278
Episode 10 – Making an Oral Presentation (Podcast) English for Oral Communication			271
Episode 9 – Preparing an Oral Presentation (Podcast) English for Oral Communication			261
1 – Communication: An Overview English for Oral Communication			258
Episode 5 – Speaking: Speech Training (Podcast) English for Oral Communication			249
Episode 4 – Listening in Formal/Academic Conte... (Podcast) English for Oral Communication			246

Figure 8.
Download statistics
from OUM iTunes U

OUM App was developed in 2012 and the app enables users to download learning materials via mobile devices such as iPad, iPhones, Android tablets and smartphones. The OUM App offers four different types of learning materials, namely, coloured PDF, HTML, video lecture and iCast. Almost 150 modules are available via the OUM App to date and iRadio OUM is the producer of all the audio files uploaded to the app.

The development of OUM App also opened the door for OUM to collaborate with Apple. In 2014, OUM iTunes U went live. OUM is the first university in Malaysia to

share its learning material via iTunes U. Initially, 17 modules were uploaded with learning materials such as coloured PDF, video lectures as well as content from iRadio OUM, such as our learning segment, learning capsule and audio books. To date, there are more than 5,000 downloads from users all over the world.

The positive response from the content developed, broadcasted and uploaded so far has encouraged iRadio OUM to continue exploring new delivery platforms and development tools to further solidify its place as a quality audio learning material provider.

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