

## ***Beyond the baseline: working with e-learning champions to transform e-learning at a research-led university***

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### **Abstract**

This paper reports on the creation of an e-learning champions' network at a research-led university and reports on interim successes and challenges. The importance of senior management buy-in at multiple points within the initiative is highlighted, as is the localised approach to this strategy.

A structured approach to working with the departmental e-learning champions has resulted in a successful start to the institution's vision of improving e-learning uptake. This approach has involved analysing the usage data generated within Moodle and other e-learning systems and combining this with information gained from interviews with champions to produce e-learning position statements for each department. These were combined to produce a faculty e-learning report to be communicated to the faculty's teaching committee. An action plan is in the process of being implemented at faculty level.

Multiple communication channels have been established to support the E-Learning Champions' Network; however, staff engagement with online communication tools has been minimal. The paper discusses the importance of face to face events in order to establish trust with and between champions and the e-learning support team. It also provides a description of engagement activities at one university which may serve as a useful model for other institutions.

### **Keywords**

E-learning, Moodle, reports, champions, network, communities of practice, special interest groups, Yammer, Confluence Wiki, senior management buy-in, strategy, initiatives, action plan, communication.

## **Introduction**

This paper outlines strategies to increase adoption of e-learning technologies by academics and teaching administrators at a large, UK university, with the overall aim of improving the student experience. Investing in e-learning has enabled the establishment of a champions' network to initiate institutional change. It explains how the network was established; followed by how information gathered from both people and e-learning systems was used to determine existing practice and develop localised future plans. The paper also explains how communication channels were established and evaluates the initial successes and challenges of these initiatives.

The importance of developing localised solutions within each faculty and department cannot be overlooked. Although a suite of institutionally supported e-learning systems are available, prior experience has shown that a one-size-fits-all solution has a limited effect on practice. Rogers' (2003) five stage model of the innovation-decision process (see Figure 3) helps to explain why working closely with departments to adapt technologies to suit their local needs appears, at this early stage, to be a more effective approach. Many researchers in the field of learning technology have based their analysis on Rogers' diffusion of innovations theory (Sahin, 2006).

Analysis of innovation diffusion research in the education sector shows that questionnaires, survey interviews and statistical analysis are commonly used for data gathering and analysis (Rogers 2003, p. 44). These same tools were used in the process described in this paper to ascertain current usage and predict future trends at the university. This has enabled recommendations on further initiatives to be made at faculty level.

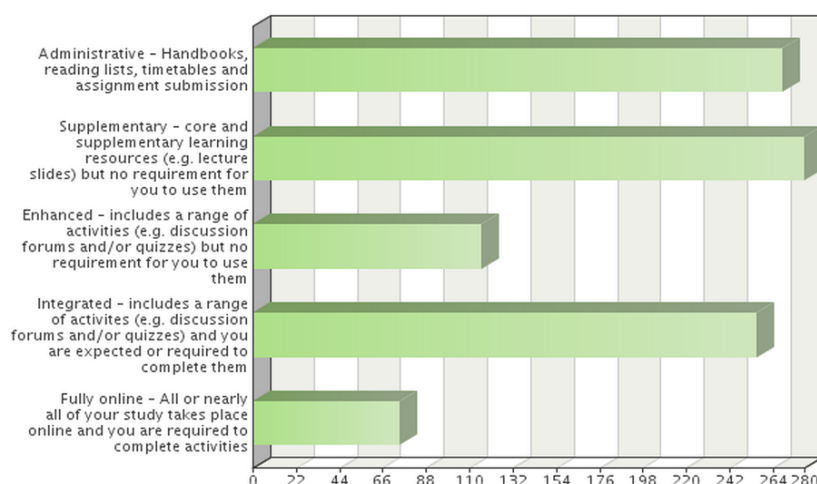
## **Background**

The university under study has over 26,000 students and over 4,000 research and academic staff. Moodle is the institutional Virtual Learning Environment (VLE) and has been in existence at the university since June 2007 (UCL E-Learning Environments, 2012). It now hosts over 4,500 active courses.

In 2011, the university mandated that every taught module must have a Moodle presence. This scheme was informally coined “Total Moodle” and marked a tipping point that has seen the university move from predominately face to face teaching, to many more modules being delivered via a blended learning model. Some modules are now also being taught in a fully online e-learning format.

Since this initiative was implemented, the majority of the university community has come to accept Moodle as the norm for e-learning provision. However, it continues to be used at a basic level overall, predominately for the delivery of electronic documents to students. In some departments the VLE is starting to change the student learning experience. In January 2013, a student IT survey at the university received just over 1000 responses. The results show a significant proportion (45%) of these students are using e-learning in an enhanced or fully integrated way (see Figure 1).

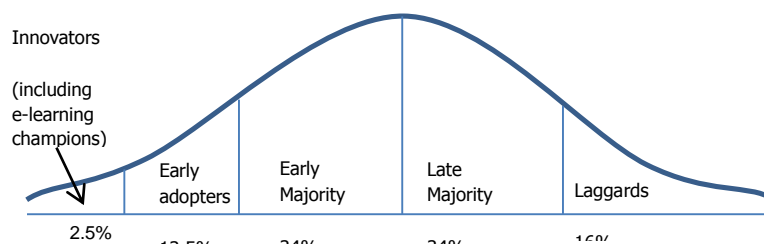
Within your programme of study overall, how would you best describe the use of technology to support your learning?



**Figure 1: Student IT survey results indicating Moodle use (Dale et al., 2013)**

Given this evidence, it appears the university has reached a point where Moodle is beginning to be used in a more enhanced way by the early majority of staff, as described in Rogers’ (2003) Innovation Adoption Curve (see Figure 2). This is supported by analysis of e-learning use within one science faculty, which has 390 active Moodle courses. The following summarises current use of e-learning within this faculty and reveals priorities for future developments:

- Lecture capture is used widely in a few departments within this faculty and there is a strong demand from students to establish this technology more widely (Dale et al., 2013).
- Around a third of all Moodle courses in the faculty use electronic assignment submissions via Turnitin and some of these are also using Moodle to provide grades and feedback (Gramp & Young, 2013).
- While Moodle Quizzes are used in less than 10% of active courses, there are wide-spread plans in the faculty to providing diagnostic formative quizzes that will contribute to enhancing feedback to students (Gramp & Young, 2013).



**Figure 2: Innovation adopter categories (Adapted from Rogers, 2006, p. 281)**

The level at which electronic assignment submissions and lecture capture are being used in this faculty signifies that the early majority of staff in this faculty are using technology in an enhanced way (see Figure 1). The methods used to obtain this information are mentioned in more detail later in this paper.

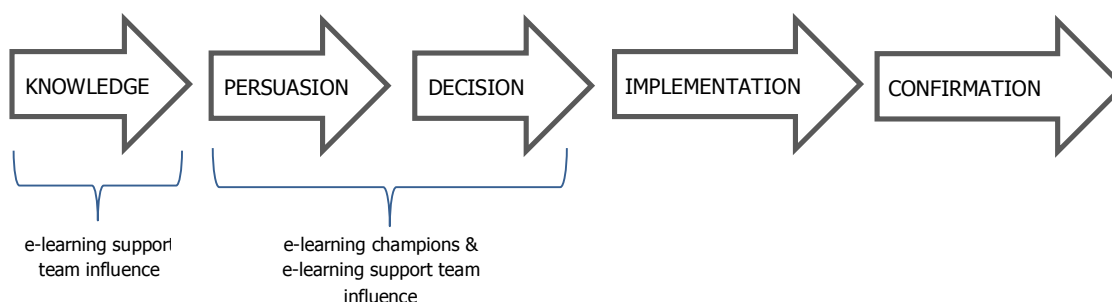
## Investing in e-learning

The university under study has recently invested in the expansion of the e-learning support team and the resulting group structure has enabled a more considered and pro-active approach to e-learning developments across the university. E-Learning Advisors are now working with departments to implement actions documented in the institution's E-Learning Strategy. One recommendation from the strategy was to establish a network of departmental e-learning champions to improve the quality of the institution's e-learning provision (UCL, 2012). The university has also developed a website, known as the Teaching and Learning Portal, to highlight good practice and teaching achievements. It also promotes the sharing of teaching and learning tools and resources across the university.

Additionally, more emphasis is being given to recognising and rewarding good teaching. The Provost Teaching Awards, and career paths enabling staff to progress to senior positions via a teaching (as opposed to research) route, are just two of the initiatives that are slowly leading to a changing culture, where learning and teaching is more widely valued.

## Champions to initiate institutional change

An important role of the university's e-learning support team is to promote the use of e-learning by imparting knowledge of what is possible to academics and support staff. This represents phase 1 in Rogers' innovation-decision process model (see Figure 3).



**Figure 3: Five stage model of the innovation-decision process (Adapted from Rogers 2003)**

The persuasion and decision phases are where e-learning champions are crucial (Rogers, 2003). Unlike central e-learning staff, the technical knowledge of many e-learning champions is only slightly more advanced than that of their colleagues, making them what Rogers (2003) refers to as 'near peers'. This gives them the ability to more easily persuade others to use new technology, because they can demonstrate that it is not too difficult to master (Simons-Morton, 2012). Proving a technology's suitability within a department is crucial to its wide spread uptake (Rogers, 2003). The champions, as early adopters (see Figure 2) can test the technology within the context of a particular discipline, in order to prove to their colleagues that it is appropriate. Staff will be more open to adopting new technologies when they can observe the benefits for themselves (Rogers, 2003). When the champions experiment with new technologies, their colleagues have a safe way to observe the

benefits, without the risks that accompany trying it for themselves, largely unguided. In order for this to work, the perception that champions are much further ahead of other academics in terms of technical ability must be avoided or this effect diminishes (Simons-Morton, 2012).

## Establishing the E-Learning Champions' Network

The process undertaken to establish the E-Learning Champions' Network paid particular attention to obtaining buy-in from senior management. To accomplish this, the head of the e-learning team emailed Heads of Departments (HoDs) asking them to nominate staff to join the champions network. This approach met with a predominantly positive response from senior managers. There are now 125 champions representing 55 departments across 10 faculties.

One important element of the network is the mix of both academic staff and teaching administrators. Each department was asked to nominate at least two champions: one in each role. The reason for this was two-fold. Firstly, the administrative/technical champions bring a perspective to e-learning initiatives that academics would be unlikely to fully appreciate themselves, such as the time-saving that electronic submission of course-work can bring to a department. These individuals also deal with administrative queries and collate module feedback from students, so they have a good understanding of current student opinion. Secondly, the university had already identified that many teaching administrators were working directly with academics to assist them in using e-learning. As part of a separate JISC-funded project, the e-learning team are working with teaching administrators to improve their digital literacies, so they are able to provide better support to academics (The Digital Department, 2013). With academics and teaching administrators working together they are able to better identify solutions to many of the problems that staff and students face in using e-learning. The champions have been vitally important in improving communication of problems to the central e-learning team.

## Obtaining information on key e-learning themes

Interviews, data analysis from institutional e-learning systems and a survey of e-learning champions have revealed the primary areas of import for academics and teaching administrators across the institution. The survey identified a list of prioritised e-learning themes for the institution as a whole. These will help to identify key areas for creating special interest groups across the institution. The interviews and data analysis have provided a way to analyse each department's activity and priorities for future developments, which will be used to guide both local (department and faculty) and institution-wide initiatives.

### E-Learning champions survey

Once the champions' network was formed, one of the first actions undertaken by the e-learning support team was to survey the champions about their department's priorities. Seventy percent completed the survey. Table 1 summarises the results.

**Table 2: E-Learning champions' survey results in order of perceived importance (Young, 2013)**

<b>Video</b>	Lecture capture, "flipping" the lecture, developing short clips and demonstrations.
<b>E-assessment</b>	Turnitin for plagiarism detection and prevention, as well as marking using GradeMark comment banks; Moodle quizzes for diagnostic, formative and summative assessment; and providing feedback via lessons and quizzes.
<b>Collaborative &amp; Group work</b>	Blogs, wikis and electronic voting handsets to initiate discussions; and audio for providing podcasts and group feedback to students.
<b>Online discussion</b>	Forums, instant messaging, web conferencing and distance learning, including short courses and CPD.
<b>Classroom Technologies</b>	New ways of presenting using tablets, online voting and electronic voting handsets.

The use of video to record live lectures is a trend that is becoming increasingly common across Europe, as illustrated by the REC:all (n.d.) project. Therefore, the fact that video generated the highest amount of interest amongst the e-learning champions who completed the survey is unsurprising.

Although student satisfaction with assessment and feedback at UK universities improved slightly in 2012 from the previous year, it remains one of the weakest areas of students' university learning experience (HEFCE, 2013). Electronic assessment methods provide several advantages over traditional, paper-based procedures such as faster marking with re-usable comment banks; more legible feedback; reduced administrative overheads; and less travel required by both staff and students, which ultimately result in students receiving faster and better feedback (JISC, 2008).

Collaborative and group work – both students and employers are asking for more authentic assessments to better prepare students for the work force. As many careers involve team-work, working on group-based activities provides valuable experience for working life (Crebert et al, 2007). Using technology to submit group-based project work also enables students to learn to use tools they are likely to utilise in their working lives, helping to improve their digital literacy.

Online discussion using forums, instant messaging and web conferencing systems is an important issue for several reasons. Many students are using Facebook and other social media to communicate with their peers about course-work and there is some concern from staff that academics are unable to guide them in their understanding as they communicate amongst themselves, without granting staff access. If academics can establish Moodle forums as the tool students use to discuss their course-work, they can then intervene, where appropriate, to ensure the conversations stay on track and students do not misinform one another. Another reason online discussion is becoming more important is that many departments are considering offering their programmes in a distance learning format. In distance courses, online discussion is paramount for engaging students, as it is used to replace much of the communication that would happen face-to-face in a campus-based course.

Classroom technologies can be used to deliver more engaging lectures. There are several technologies that can support this: electronic voting handsets (or online voting tools, such as the Choice activity in Moodle) can be used to poll students, facilitate discussion around the question and allow the lecturer to elaborate on poorly understood materials (Mazur, 1997). The Hot Question plugin for Moodle can be used to encourage students to learn about a topic before the lecture and ask questions that other students vote on, so the lecturer can respond to the most popular questions in the lecture, rather than delivering content in a non-discursive way. Lecturers who teach mathematics and science subjects are also starting to investigate ways to draw on notebooks or tablets that are remotely connected to a data projector for students to see on the screen, as an alternative to writing on a blackboard or visualiser. Being a mobile device, this also allows students to demonstrate their own working out to the class, making the lecture more interactive. Also, unlike black and white boards, anything projected in a lecture is captured for later review in Lecturecast, which is the university's lecture capture system, based on Echo360 technology.

## **Interviews and e-learning system data analysis**

In order to obtain evidence to guide the actions and priorities of the champions' and e-learning support staff, a number of data sources were analysed and reports for each department subsequently produced. These included findings from interviews with champions and Heads of Department and data analysis of e-learning system usage. The report is designed to give champions an overview of key themes in a department, upon which the champions and e-learning facilitators can base informed decisions on how to improve local e-learning provision.

Interviews were conducted at department level in order to understand how e-learning initiatives best meet the needs of the staff and students within a particular discipline, as this varies widely. "Many adopters want to participate actively in customising an innovation to fit their unique situation" (Rogers, 2003, p.17). This process has helped to achieve buy-in from the champions. This is evidenced by an increase in the interaction that the E-Learning team has had with previously self-sufficient departments. Since the meetings, several of these departments have come forward for assistance with some of the items discussed.



Usage data from Google Analytics, Moodle, Lecturecast and electronic reading lists was analysed to determine how core e-learning tools are being used. This has enabled the e-learning support team to determine the uptake of e-learning tools within each department at a certain point in time. Department reports were developed to present this data to local teaching committees. The data supplements the statements about the current activity and future plans gathered from the interviews with the HoDs and champions. Involving key staff members from departments has generated a sense of local ownership which has helped to facilitate buy-in and embed good practice that is specific to each department (UCL, 2012).

communications									administration																			
News forums			Learning forums			Chats			Schedulers			Surveys			Questionnaires			Choices			Certificates			Files				
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✓	<a href="#">1</a>	16	✓	<a href="#">9</a>	3		-	-		-	-		-	-	✓	<a href="#">2</a>	3		-	-		-	-		-	-	✓	<a href="#">95</a>
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✓	<a href="#">1</a>	50	✓	<a href="#">1</a>	14		-	-		-	-		-	-		-	-		-	-		-	-		-	-	✓	<a href="#">76</a>
✓	<a href="#">1</a>	0	✓	<a href="#">1</a>	0	<small>14 Student forum posts</small>			✓	<a href="#">1</a>	20		-	-	✓	<a href="#">1</a>	0	✓	<a href="#">1</a>	26		-	-		-	-		-
✓	<a href="#">1</a>	13	✓	<a href="#">1</a>	0		-	-		-	-		-	-	✓	<a href="#">2</a>	2		-	-		-	-		-	-	✓	<a href="#">55</a>

**Figure 4: Moodle reporting tool showing the number of discussion posts in a learning forum**

The usage data in the reports requires manual investigation of the way the e-learning tools within Moodle are actually being used in order to draw meaningful conclusions. This process was facilitated by the development of a customised reporting tool that allows the e-learning support team to easily link through to Moodle activities within courses for further analysis of their use. In many cases it was the number of interactions within an activity, rather than the number of activities themselves that indicated the true use of that technology by students. For example, although many Moodle courses provide a learning forum that enables students to ask questions, the majority of these are not utilised by students. Figure 4 shows how the report highlights which learning forums are actually being used by showing the number of posts within each forum. Although one course has nine learning forums available to students, these contain a total of only three posts, indicating low usage. A course with only one learning forum has 14 posts, which suggests that some of these students are making use of the technology. Clicking on the forum link allows the e-learning team to check that it is students, and not staff, who are posting to the forum. It also allows them to investigate what the students are using the forum for, in order to feed this information in to the department report.

The department reports have been synthesised to create an overall e-learning report for the faculty. From the information obtained from interviewing the HoDs and champions, recurring themes were highlighted and a summary of key points and recommendations provided. Currently this process has been completed for one of the ten faculties at the institution; however, it is planned that every faculty will have an e-learning report by 2014.

Each faculty e-learning report will be presented to the relevant faculty teaching committee for review and comment. This gives representatives from across the faculty, who are not necessarily e-learning champions, the opportunity to provide feedback and rectify any inaccurate or incomplete information. The recommendations from the report are then discussed and prioritised in a faculty-wide meeting of all the department's e-learning champions, chaired by the Faculty Tutor. Once again, senior management buy-in at this stage of the process indicates to participants that their work is valued by the organisation and ensures that someone who has influence over the faculty's budget is present, so the availability of resources can be considered during the discussions (Wankel & DeFillippi, 2008).

## Establishing communication channels

Department meetings with HoD and e-learning champions are a useful introduction to the work that the department are currently doing and plan to do. The fact these occur face-to-face means the e-learning support

team is better able to connect with academic staff and teaching administrators (Henttonena & Blomqvist, n.d.). To supplement this, and enable connections to be made amongst the e-learning champions, several electronic communication channels have been established that perform different purposes:

- Yammer is a social networking tool that forms the communication hub for the E-Learning Champions' Network. This is where informal conversations around different themes occur, including signposts to appropriate resources.
- The E-Learning Wiki (based on Confluence Wiki) is where champions can collaborate on documents in order to share e-learning practice and tips with other staff.
- The E-Learning Champions' Network Moodle course is where e-learning enthusiasts can demonstrate how they are using Moodle for other UCL staff to observe.
- A monthly E-Learning Champions' Newsletter highlights new and upcoming technology, features and events to provide champions with the knowledge they require to perform their roles effectively. The champions are held in high esteem within the department due to their e-learning knowledge. Keeping them informed of recent developments builds upon their skills and knowledge, helping them to further improve their status.

While there were initial concerns that using different media may dilute the community effort, it was felt that having a variety of tools, each with their own strengths and weaknesses, would help to reach more of the community. Online marketing companies encourage the use of multiple communication channels for this very reason (eReleases, n.d.). An effort has been made to link the primary communication tools, so it is easier for the champions to navigate between them. Perhaps more can be done in this way, by utilising tools that people are already familiar with, like Twitter and Facebook, and linking these back to the core areas where the primary information is being shared.

## Evaluating interim successes and challenges

### Initial successes

Senior management buy-in has been essential to the successful development of the E-Learning Champions' Network. Key members of senior management including the Vice-Provost of Education, HoDs, faculty tutors, the head of the e-learning support team and members of teaching committees have given vital endorsement to the formation and outputs of the e-learning champions' network.

More project funding sources for e-learning developments have emerged this year from the department and faculty meetings, with greater input from the e-learning team than has occurred in the past. These E-Learning Development Grants, and similar schemes within schools and faculties, support the development of e-learning initiatives in a structured project environment. The submission of more innovative projects than in previous years may be partly attributed to the involvement of e-learning facilitators in the refinement of project ideas before bids were submitted. It also indicates an increased level of maturity in the use of e-learning technologies across the institution.

### Areas for improvement

Since the community is still in its infancy, communication to and amongst champions is relatively underdeveloped. Champions have indicated they have not been receiving email messages and are therefore unaware of some of the events and initiatives being promoted by the e-learning support team. There has also been slow uptake of online social media for sharing information amongst the community. Yammer is used heavily by some members of the e-learning team, and around 30% of champions have joined this social media platform in order to receive messages and contribute to conversations. That means around 70% of champions are missing these conversations, so they are probably unaware of many e-learning initiatives that are taking place. However, those who have participated have indicated that they find the conversations useful. The e-learning support team will continue to encourage its use.

Sharing best practice via Moodle or the Wiki has only been undertaken by a couple of champions, at the suggestion of e-learning team members. More work needs to occur to promote the availability and benefits of tools for sharing ideas and working collaboratively on processes. This will help to minimise duplication of effort and allow staff to take advantage of lessons learned in other departments. It is hoped the formation of special interest groups will result in development of these areas to form a shared knowledge base.

While staff frequently indicate to the e-learning support team that they wish to know what other educators are doing, the ability to find case studies within the Teaching and Learning Portal is currently difficult, due to suboptimal search engine functionality. In addition, the fact that the portal is in its infancy, means that few people know of its existence. A project is underway to improve the search engine for the university's websites in general, which should result in better visibility of case studies. Additional promotion of the portal should assist with its adoption as well.

It is anticipated that an E-Learning Champions' Newsletter will replace some of the discreet communications mentioned above with a more visually appealing, collated set of information. The newsletter will also highlight a case study involving technology each month, with the aim of raising awareness, as well as lifting the profile of this area of the Teaching and Learning Portal further.

## Conclusion and next steps

While the e-learning reports are in the process of being written, actions are emerging from conversations with staff in departments that are beginning to stimulate a range of ideas for e-learning initiatives. These include:

- The development of special interest groups based on key themes such as video, digital literacies, e-assessment and feedback, and social media. Each of these themes can also be supported by the development of support materials and workshops led by central e-learning staff, with input from staff within the department. One benefit of having the champions present about their own experiences at these events is that this will help to convince their colleagues of the suitability of technology within their discipline. Departmental staff bring a local perspective to the use of the technology and can therefore identify issues that may be overlooked by core e-learning staff. They also have the opportunity to try technology themselves, so they can present the "real story" to their colleagues, both the positive and negative experiences. This will help staff to make an informed decision about whether or not to adopt e-learning technologies themselves.
- Supplementing the online communities with face-to-face events, such as learning lunches, networking events and meetings. These should initiate further online interactions and build trust amongst members more quickly and effectively (Henttonena & Blomqvist, n.d.).
- Encouraging the ownership of digital spaces created by the e-learning team to aid communication between staff and champions by introducing the use of this technology in a safe manner. For example, an introductions forum in Moodle would allow champions to learn what e-learning initiatives their peers are involved in and network with those who have similar interests. In addition, asking staff to tag their profiles with their e-learning interests (perhaps using the Moodle profile list of interests) may help to facilitate the creation of further special interest groups in future.
- Developing a network of student e-learning champions to mirror the staff champions will bring a student perspective to the work that is already being undertaken within the departments.
- Undertaking further analysis of e-learning tool usage in future and comparing this to the current analysis will allow the E-Learning team to determine the probable impact of these initiatives on uptake. In order to account for natural adoption behaviour, usage data from archives can also be analysed to see if a surge in adoption has accompanied the initiatives described in this paper.

The strategies discussed in this paper will continue to be followed and adapted to provide information relevant to each faculty. Information from all faculties will then be compared to produce an overview of e-learning practice at the institution. The process is already showing benefits of improved communication and idea generation, which has led to increased e-learning activity by staff in several departments.



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