



Electronic Management of Assessment in UK HE 2016

A HeLF Survey Report

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ABOUT THE HEADS OF E-LEARNING FORUM (HELF)

HeLF was established in 2003 as a UK 'network of senior staff in institutions engaged in promoting, supporting and developing technology enhanced learning' (HeLF, 2015). Each UK Higher Education institution can nominate one representative to HeLF which now has over 130 institutional members.

HeLF has three face-to-face meetings each year on a topical eLearning theme. It also has an active mailing list which is restricted to HeLF members in order to provide a closed forum for debate on current issues.

HeLF acts as 'an advisory body for national and governmental organisations' such as the UK Higher Education Academy (HEA) and JISC, on 'issues relating to eLearning institutional strategy and implementation'. It is 'proactive in soliciting responses from such bodies and promoting the views of its membership'.

Enabling collaboration on 'the strategic implications of developing and implementing eLearning', HeLF supports 'the processes by which eLearning strategy can be effectively created, and implemented, including advice, support and co-operation between members' (HeLF, 2016).

More information about HeLF and its activities is available at <http://www.helf.ac.uk/>



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EXECUTIVE SUMMARY

This report presents the analysis of the Heads of eLearning Forum (HeLF) survey on Electronic Management of Assessment (EMA) UK Higher Education (HE) in 2016. The key findings from the 53 responses (40% response rate) are:

- Nearly 2/3rds (64%) of institutions have an institution-wide **policy** or code of practice for eSubmission which shows that eSubmission is becoming well-established. eMarking (25%), eFeedback (38.5%) and eReturn (30.7%) policies are less prevalent.
- **eSubmission** as the only form of submission (41%) is just entering the mainstream. **eFeedback**, as the only form of feedback, is, however, still in the early stages of development (25%).
- **Turnitin** and the institutional VLE dominate in almost equal proportions, as the systems for providing eFeedback in text format to students. However, institutions favour more than one option with considerable variety across departments for managing **large** multimedia and software **files**
- The number of institutions who have an **integrated EMA approach** over the whole workflow is very low. With 35% not engaged in this level of integration. A further 29% developing solutions to a fully integrated approach and 27% considering doing so.
- Academics have more **responsibility** than administrators in creating eSubmission points and other columns for marks, but administrators are actively involved. There is diversity of practice as it mainly varies within departments instead of being university or department wide.
- Academic staff have positive **attitudes** to eMarking (74%) and eFeedback (86%) when taking Positive and Neutral responses together
- High percentages of students can see their grades (60%) and links to eFeedback (57%) on a central **dashboard** compared to a third, 34%, who can see their assignment dates. There is no university at which students are able to compare their grades with others in their cohort.
- There are no universities with a university-wide approach to summative online **examinations**, but almost 3/4 (73.5%) do have them at either a module or department level. 69% are using computer classrooms whereas none are using mobile devices and only 30% are considering doing so.
- **Critical success factors** were identified as: demonstration of tangible benefits, stakeholder engagement, leadership and institutional culture, improving processes and workflows, system functionality and reliability, staged roll-out across the university, support and training, monitoring EMA adoption and performance.
- **Current areas of priority for development** were identified as: improving the functionality of EMA (and related) systems and increasing adoption of EMA, analytics and data-informed decision making.

INTRODUCTION

The following definitions were used in the survey for clarity:

- eSubmission – electronic submission of an assignment
- eMarking – electronic marking (including offline marking eg in Word)
- eFeedback – electronic feedback (ie text, audio, video but not hard copy)
- eReturn – electronic return of marks

This report is the sixth in a series of surveys of HeLF members that aim to understand and track the changing digital landscape in UK HE and its impact on Heads of eLearning. Four earlier surveys on Learning Analytics in 2015, Tablet Technologies in 2014 and the Electronic Management of Assessment (EMA) 2011 to 2013 are available on the HeLF website at: <http://www.helf.ac.uk>

COMPARISONS

This report will be supplemented by a further report that will analyse the 2016 data against HeLF EMA surveys undertaken in 2011-2013.

METHODOLOGY

This research on the UK HE levels of implementation and development of Electronic Management of Assessment (EMA) draws upon the perceptions of HeLF members on the situation in their own institution. HeLF members have an overview of eLearning strategy, policy and practice in their institution.

The HeLF membership was surveyed online during May/June 2016. The survey was developed by the authors in consultation with other members of the HeLF Steering Group. All the data has been held anonymously and securely. The results have been analysed using qualitative and quantitative methods.

RESULTS

There were 53 responses from separate institutions, resulting in a response rate of 40% of the total HeLF membership. The results to each question are given below.

MATURITY

This report offers a snapshot of the EMA landscape in the UK higher education sector and will assist with comparisons against previous HeLF EMA surveys. It has not been possible to make any real judgment with regard to EMA maturity in the sector. With no shared understanding of what an EMA maturity index might contain, it is not yet possible to describe what EMA maturity will look like although the recent publication of benchmarking/ self-assessment tools offer sets of principles against which institutions can better understand their own performance (NUS, 2016, Ferrell, 2016a) may have some value as a rough indicator of EMA maturity within UK HE.

DOES YOUR INSTITUTION HAVE AN INSTITUTION-WIDE POLICY (CODE OF PRACTICE) FOR:

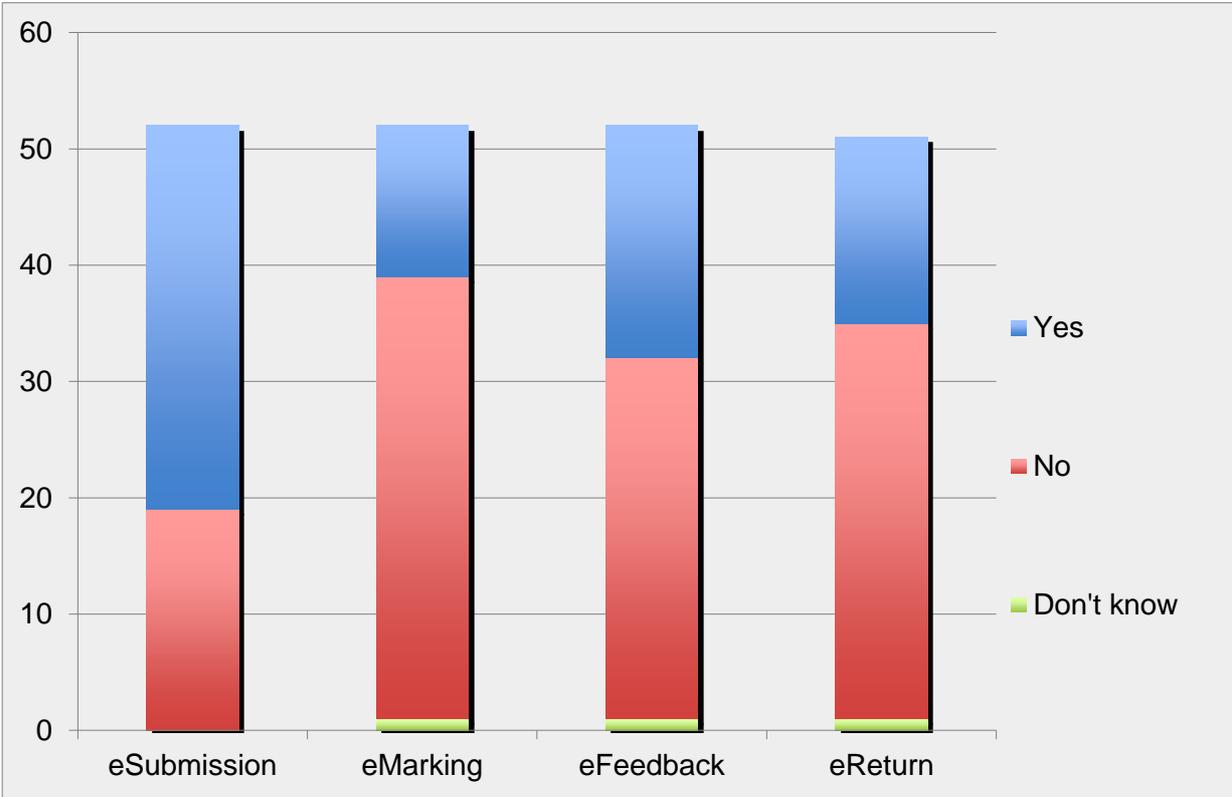


Figure 1: Does your institution have an institution-wide policy (code of practice) for?

	Yes	No	Don't know	Response - Count
eSubmission	33	19	0	52
eMarking	13	38	1	52
eFeedback	20	31	1	52
eReturn	16	34	1	51

Nearly 2/3rds (64%) of institutions have an institution-wide policy or code of practice for eSubmission which shows that eSubmission is becoming well-established. eMarking (25%), eFeedback (38.5%) and eReturn (30.7%) policies are, however, less prevalent.

WHICH SOFTWARE DOES YOUR INSTITUTION RECOMMEND FOR eFEEDBACK IN TEXT FORMAT?

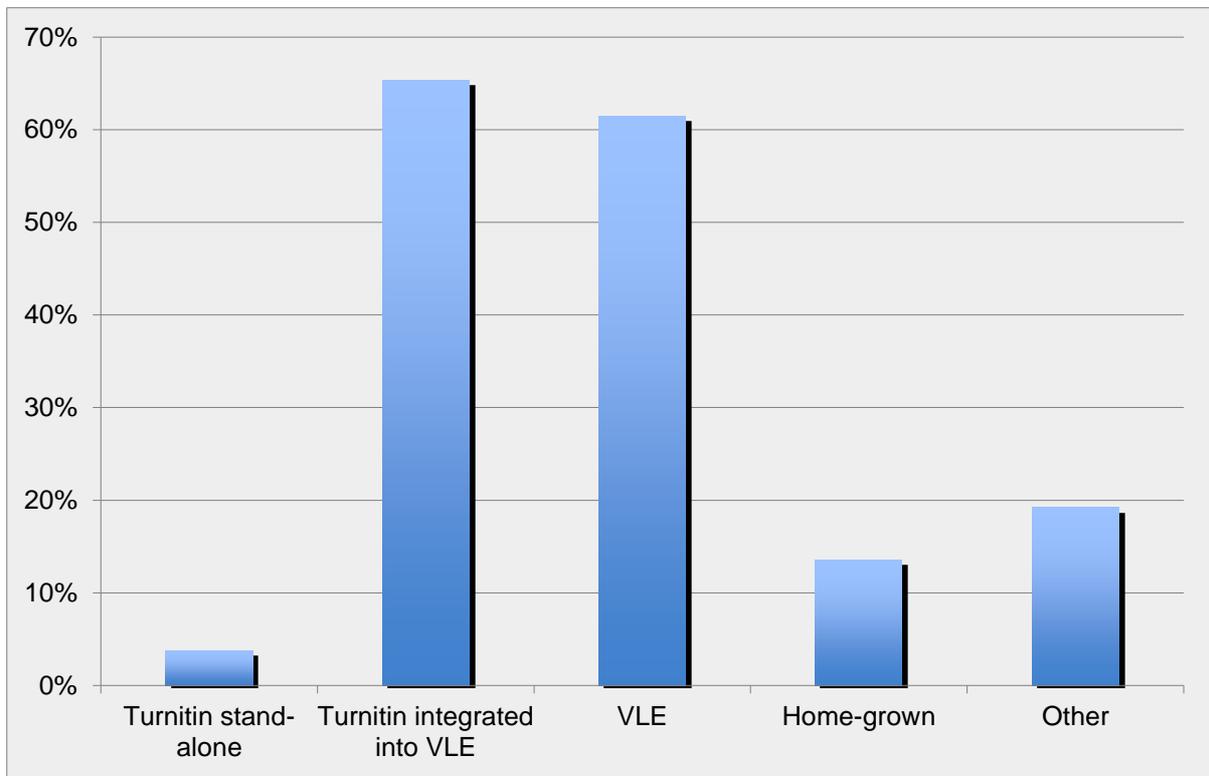


Figure 2: Which software does your institution recommend for eFeedback in text format?

	Response – Percentage	Response - Count
Turnitin stand-alone	3.8%	2
Turnitin integrated into VLE	65.4%	34
VLE	61.5%	32
Home-grown	13.5%	7
Other (please specify)	19.2%	10
Answered question		52

Whilst Turnitin and the institutional VLE dominate in almost equal proportions, as the systems for providing eFeedback in text format to students, the free-text comments reveal that there is clearly a variety of software being used to deliver non-standard assignments, with text-based eFeedback.

Alternatives to the VLE or Turnitin integrated with the VLE provided under 'other' are: student records system, media server, ePortfolio system.

WHICH OF THE FOLLOWING WOULD YOU SAY IS THE MOST COMMON PRACTICE?

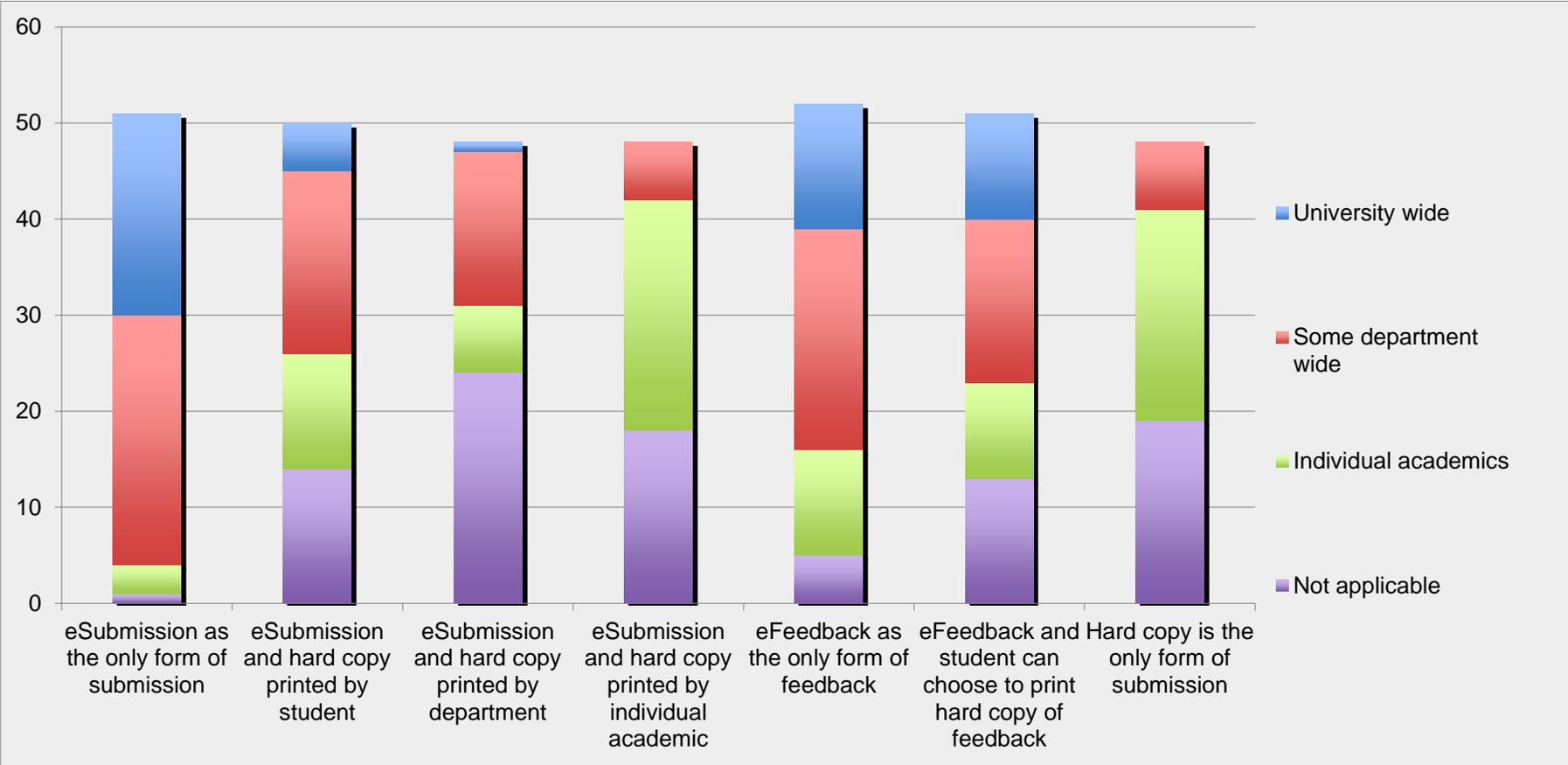


Figure 3: Which of the following would you say is the most common practice?

	University wide	Some department wide	Individual academics	Not applicable	Response - Count
eSubmission as the only form of submission	21	26	3	1	51
eSubmission and hard copy printed by student	5	19	12	14	50
eSubmission and hard copy printed by department	1	16	7	24	48
eSubmission and hard copy printed by individual academic	0	6	24	18	48
eFeedback as the only form of feedback	13	23	11	5	52
eFeedback and student can choose to print hard copy of feedback	11	17	10	13	51
Hard copy is the only form of submission	0	7	22	19	48
Answered question					53

The data shows that with a 41.2% response, eSubmission as the only form of submission is just entering the mainstream. eFeedback, as the only form of feedback, is, however, still in the early stages of development, with a much lower response of 25%.

DOES YOUR INSTITUTION HAVE AN INTEGRATED EMA APPROACH?

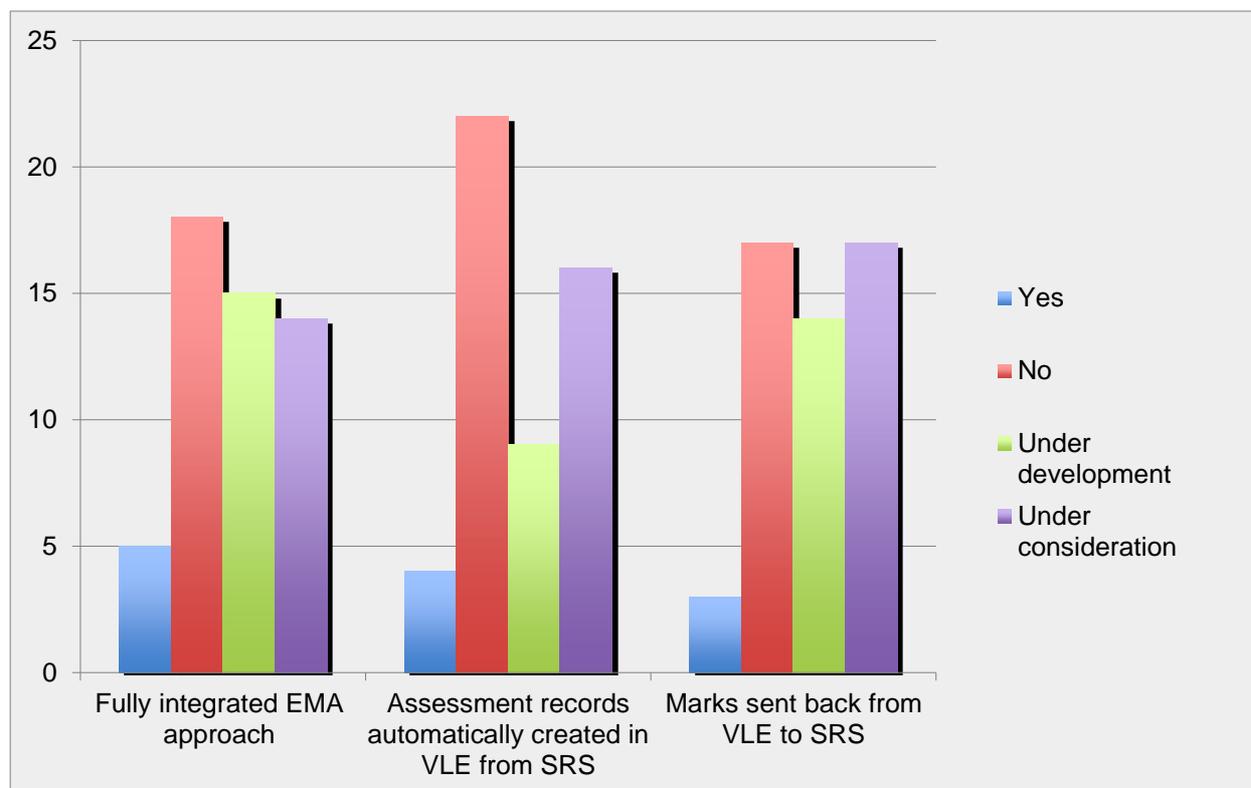


Figure 4: Does your institution have an integrated EMA approach?

	Yes	No	Under development	Under consideration	Response - Count
Fully integrated EMA approach - Student Record System (SRS), eSubmission system and automated return of marks to SRS?	5	18	15	14	52
Assessment records automatically created in the VLE from the SRS?	4	22	9	16	51
Marks sent back from the VLE to the SRS?	3	17	14	17	51
Answered question					52

The number of institutions who have an integrated EMA approach over the whole workflow is very low. With 34.6% not engaged in this level of integration – or working towards/ thinking about it, a further 28.9% developing solutions to a fully integrated approach and 26.9% considering doing so, it suggests that overall the sector is still at a very early stage of researching/ investigating how this can be made to work.

WHO HAS RESPONSIBILITY FOR?

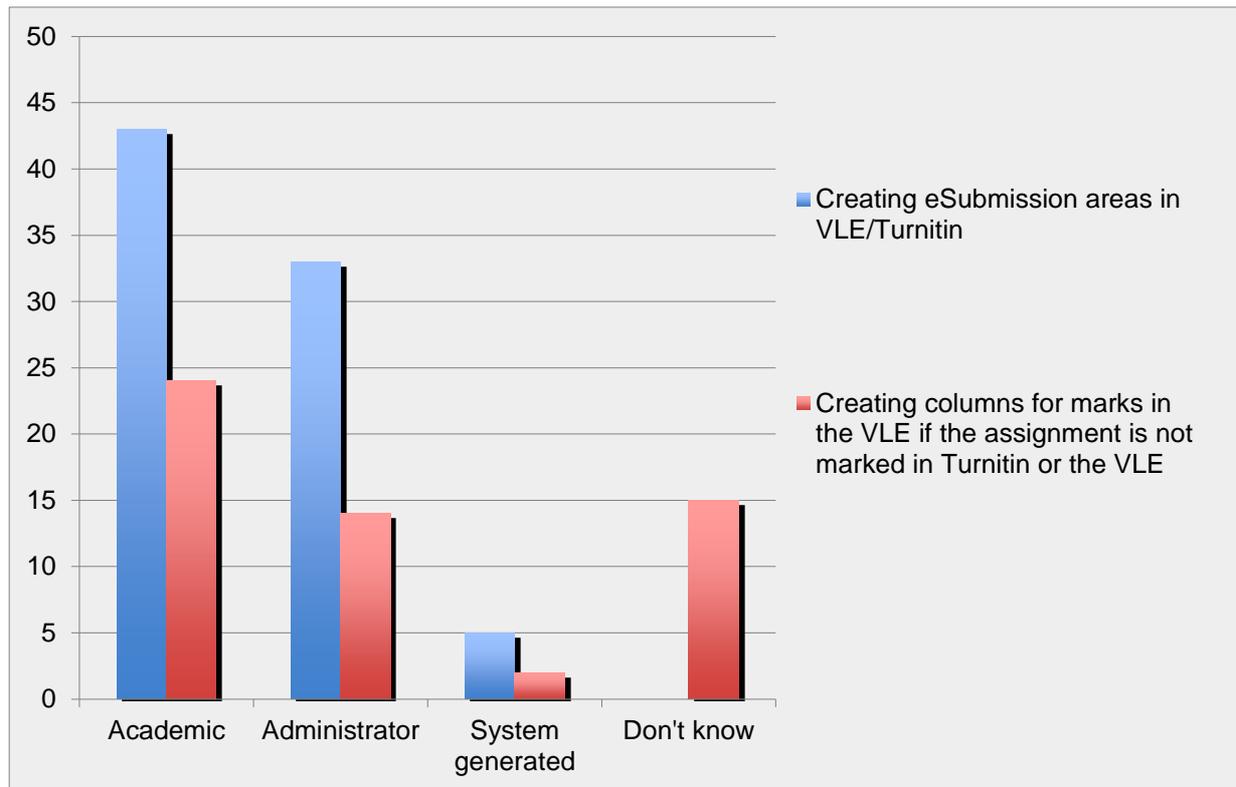


Figure 5: Who has responsibility for?

	Academic	Administra tor	System generated	Don't know	Response Count
Creating eSubmission areas in VLE/Turnitin	43	33	5	0	50
Creating columns for marks in the VLE if the assignment is not marked in Turnitin or the VLE	24	14	2	15	44
Answered question					50

Additional information relating to this question was provided in the catch-all question 15.

“Relating to question 5 above. This process is usually owned by programme administrators or by academics. For some high stakes distance learning programmes, or complex programmes with dedicated eLearning support, a Learning Technologist may be responsible for creating eSubmission areas and/or to a lesser extent creating additional columns in the Grade Centre.”

WHAT IS THE RANGE OF THE RESPONSIBILITY?

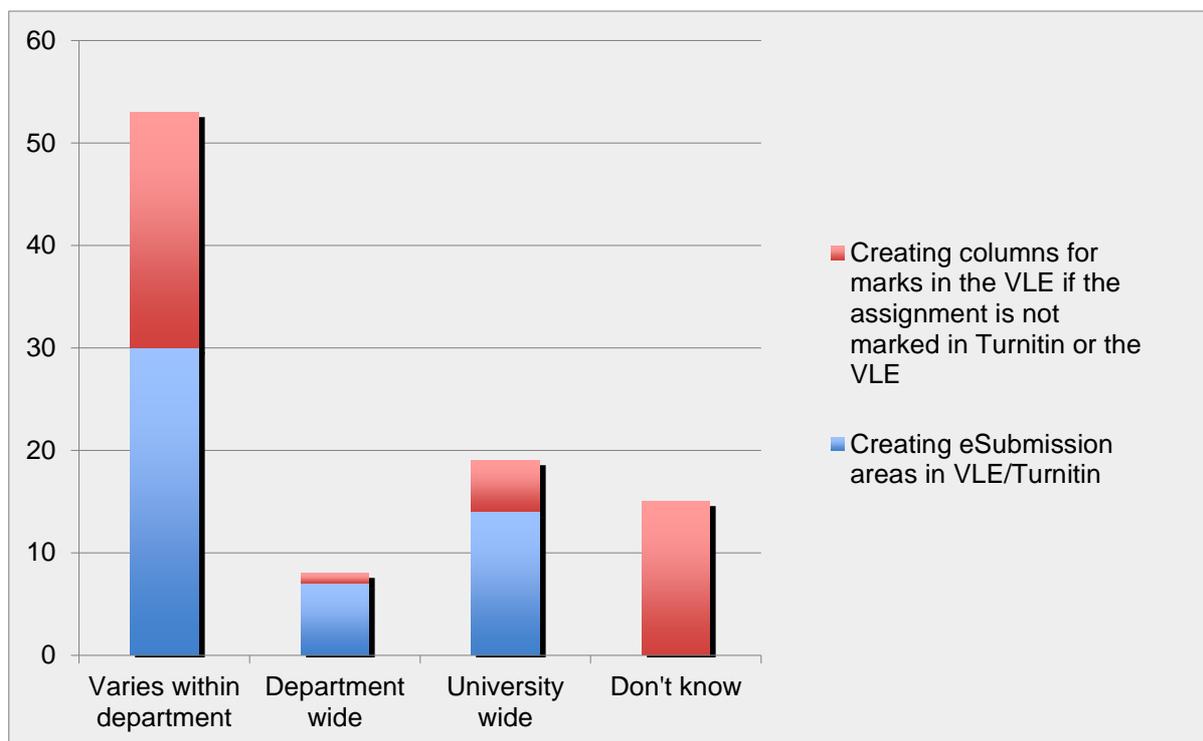


Figure 6: What is the range of the responsibility?

	Varies within department	Department wide	University wide	Don't know	Response - Count
Creating eSubmission areas in VLE/Turnitin	30	7	14	0	51
Creating columns for marks in the VLE if the assignment is not marked in Turnitin or the VLE	23	1	5	15	44
Answered question					51

The range of responsibility for creating eSubmission areas in the VLE or Turnitin varies within department 59% compared with 27% university wide and 14% department wide. This shows there is more diversity of practice than consistency. There is even more diversity in creating columns for marks in the VLE if the assignment is not marked in Turnitin or the VLE with 52% varying within departments compared to 23% university wide and 2% department wide. Also, 34% did not know who had this responsibility.

HOW WOULD YOU RATE ACADEMIC STAFF ATTITUDES TO?

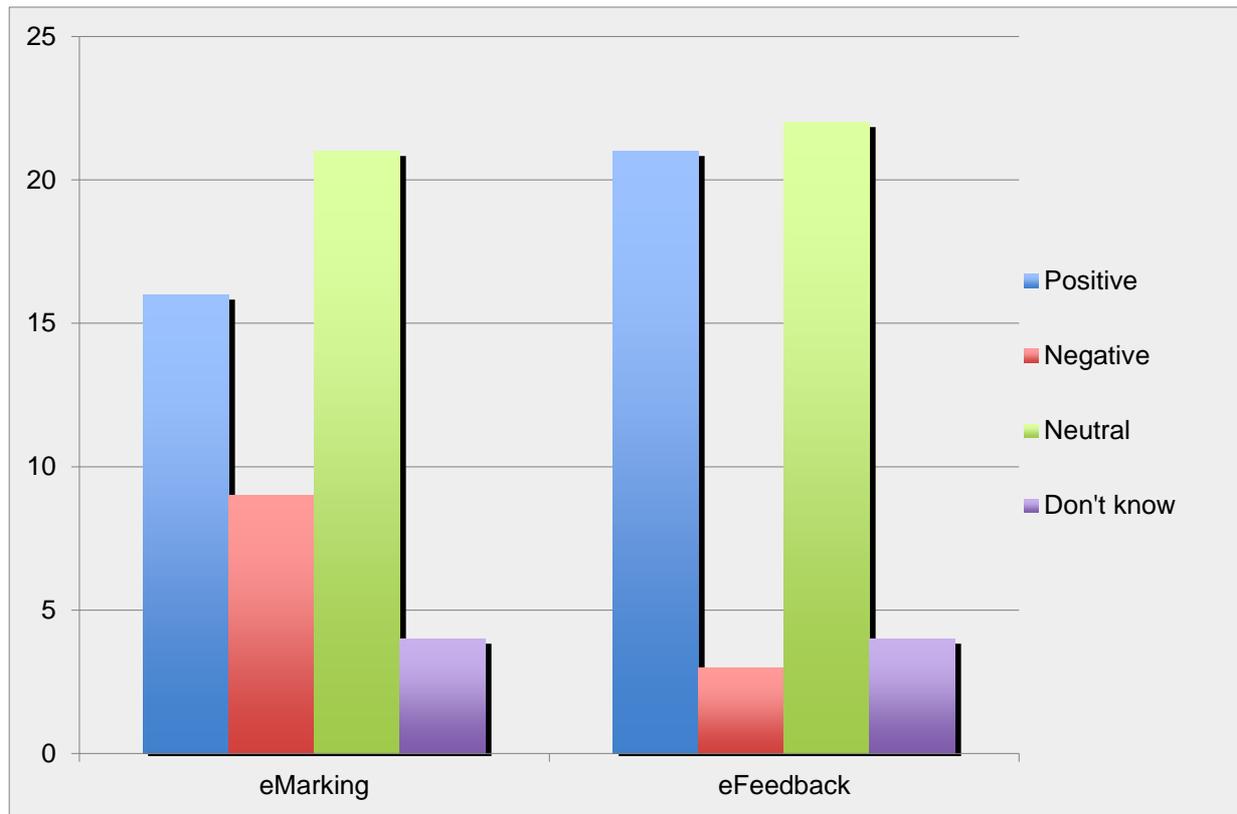


Figure 7: How would you rate academic staff attitudes to?

	Positive	Negative	Neutral	Don't know	Response Count
eMarking	16	9	21	4	50
eFeedback	21	3	22	4	50
Answered question					50

When asked to rate academic staff attitudes to eMarking and eFeedback, it would seem that high levels of positivity to both of these activities predominate when taking Positive and Neutral responses together (eMarking 74% either positive or neutral, and eFeedback 86% either positive or neutral). Four comments expanding on this question were provided in response to question 15.

“No box gives the right answer for us - which is that academics have strong views on e-marking and e-feedback - but these are often totally the opposite. Some like it and so really do not.”

“It's generally positive, with notable exceptions and dependent on the subject area.”

“is impossible to answer as they are not all positive nor negative, it's a mixed bag hence the importance of bringing people along, but you'll never end up with 100% who are positive.”

“markers are polarised over marking and feedback - some love it (younger staff), some hate it - there's not much in-between.”

ARE STUDENTS ABLE TO ACCESS THE FOLLOWING ON A CENTRAL DASHBOARD ON A PORTAL OR IN THE VLE?

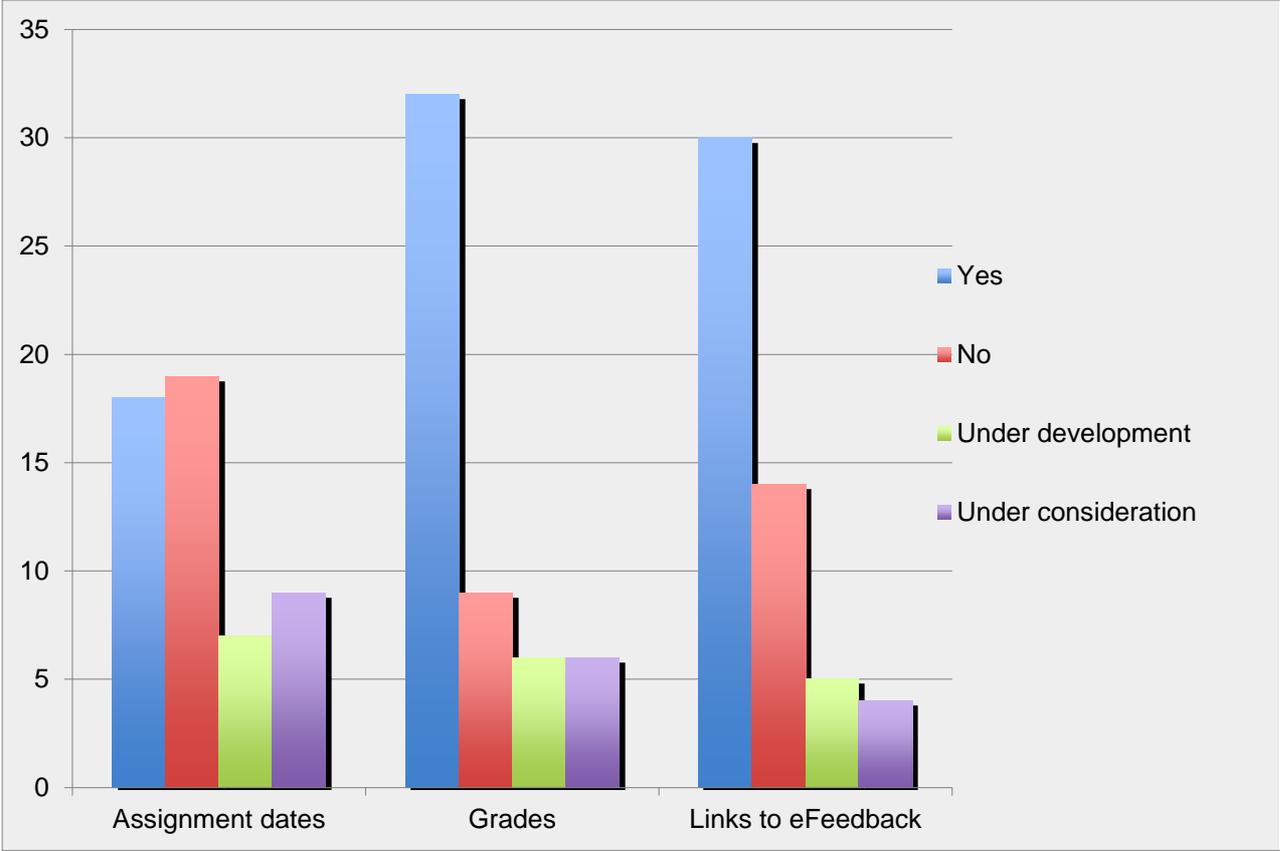


Figure 8: Are students able to access the following on a central dashboard on a portal or in the VLE?

	Yes	No	Under development	Under consideration	Response Count
Assignment dates	18	19	7	9	53
Grades	32	9	6	6	53
Links to eFeedback	30	14	5	4	53
Answered question					53

Similarly high percentages, 60% and 57% respectively, of students can see their grades and links to eFeedback on a central dashboard compared to a third, 34%, who can see their assignment dates. Similar percentages of about 10% are under development or under consideration for accessing grades and eFeedback links. This is higher, 15%, for assignment dates which has lower availability. Only 36%, 17% and 26% respectively do not have access on a dashboard to dates, grades and eFeedback and are not developing or considering it.

IF THE STUDENTS CAN ACCESS THEIR GRADES ARE THEY ABLE TO COMPARE THEIR GRADES WITH OTHERS IN THEIR COHORT?

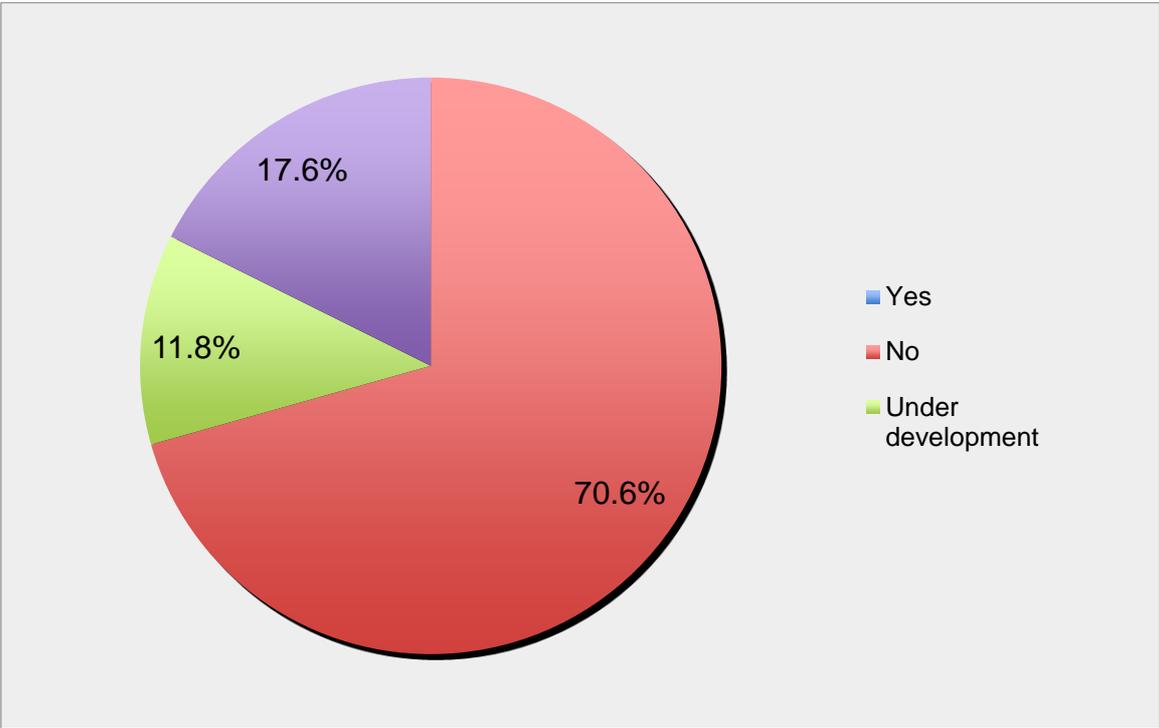


Figure 9: If the students can access their grades are they able to compare their grades with others in their cohort?

	Response – Percentage	Response - Count
Yes	0.0%	0
No	70.6%	36
Under development	11.8%	6
Under consideration	17.6%	9
Answered question		51

There is no university at which students are able to compare their grades with others in their cohort. 12% of universities are developing this functionality and another 18% are considering. The majority, 71%, of students cannot compare their grades and will not be able to in the near future.

HOW DO YOU MANAGE THE ESUBMISSION OF LARGE FILES EG VIDEO, CAD, 3D DESIGN?

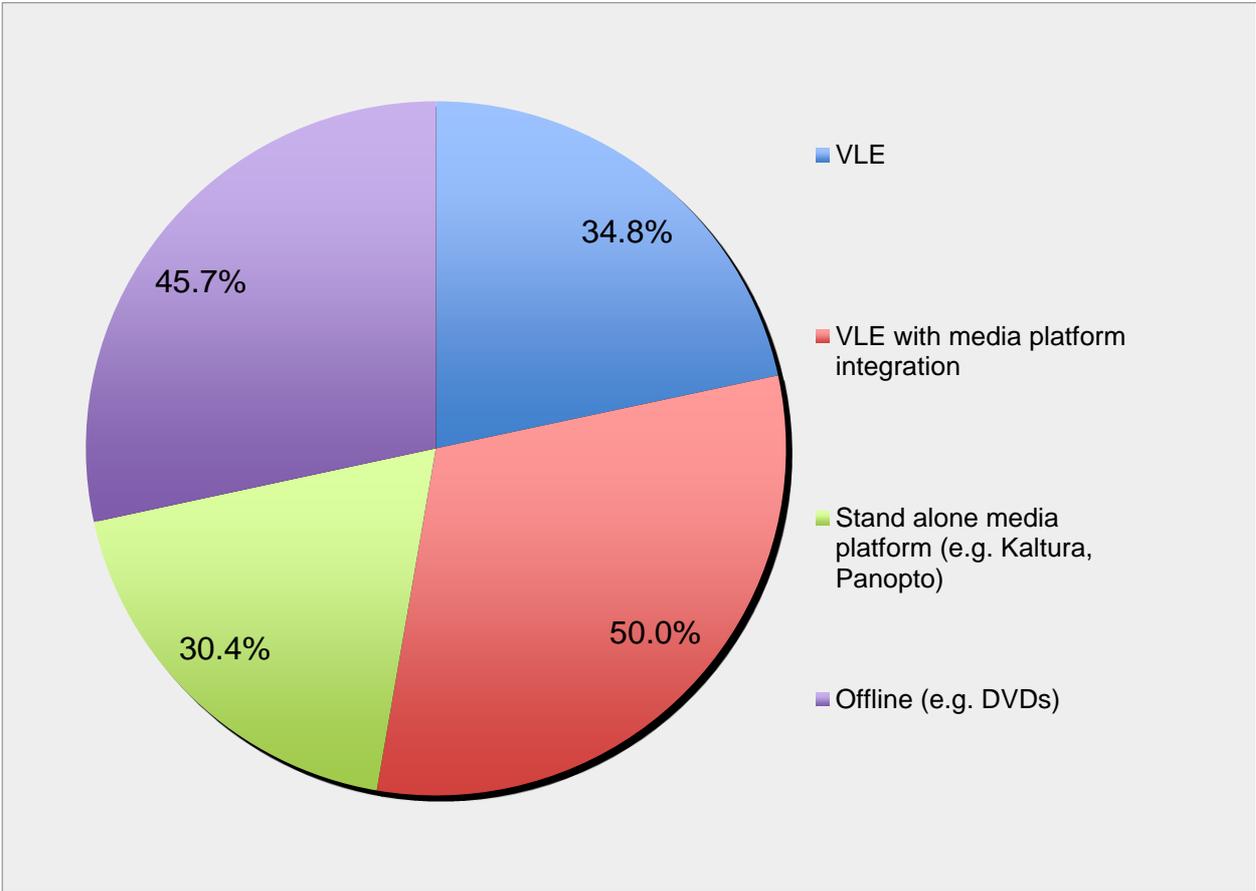


Figure 10: How do you manage the eSubmission of large files eg video, CAD, 3D design?

	Response – Percentage	Response - Count
VLE	34.8%	16
VLE with media platform integration	50.0%	23
Stand alone media platform (e.g. Kaltura, Panopto)	30.4%	14
Offline (e.g. DVDs)	45.7%	21
Other		13
	Answered question	46

As alluded to in Figure 2, the VLE is not always the appropriate vehicle for managing large multimedia and software files. The percentage responses show that institutions favour more than one option with considerable variety across departments with Computer Science,

Media, Design and Technology being particularly server/ storage space-hungry and having specific requirements.

The free text comments revealed that 7 institutions have developed local and in-house solutions for these non-text files with one local solution handling over 200,000 submissions each year with file sizes up to 8GB (being the largest tested file).

It is also interesting to note that 45.7% of respondents still rely upon offline solutions such as DVDs and Pen Drives.

TO WHAT EXTENT ARE TRADITIONAL SUMMATIVE EXAMS BEING REPLACED BY ONLINE EXAMS?

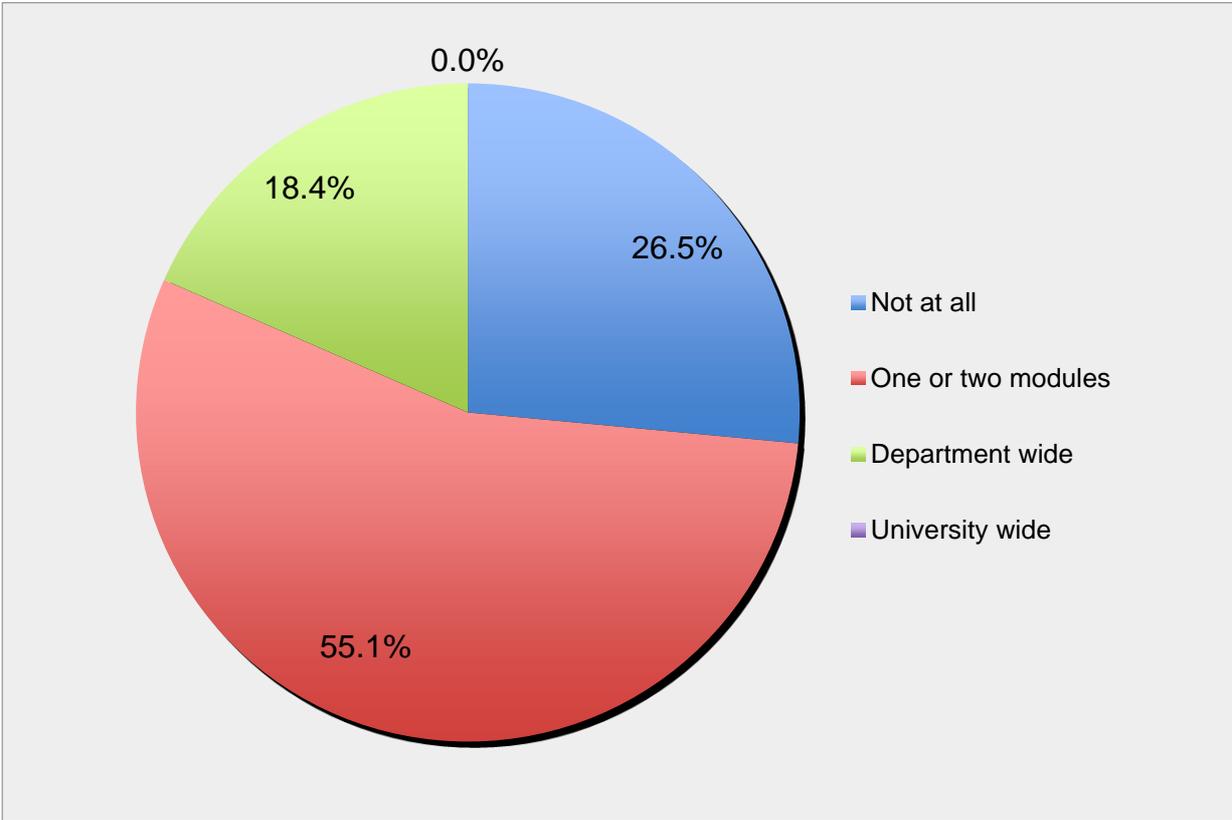


Figure 11: To what extent are traditional summative exams being replaced by online exams?

	Response – Percentage	Response - Count
Not at all	26.5%	13
One or two modules	55.1%	27
Department wide	18.4%	9
University wide	0.0%	0
Other		9
Answered question		49

Summative online examinations have become a topic for discussion and sharing of experience amongst HeLF members within the closed HeLF members Jiscmail list and are potentially an area where we would expect to see developments in the next 12-24 months. Whilst no respondents report a university-wide approach to summative online examinations, almost three-quarters of respondents (73.5%) report that their university is doing something at either a module or department level.

The free-text responses suggests there is at present considerable variation of adoption of online examinations within institutions but with some institutions actively promoting adoption.

“We're currently at pilot stage with this - so it's department wide for one or two participating in the pilot, as well as it being implemented for other selected modules across the University.”

However, there seems to be developments happening that are laying the groundwork for greater adoption.

“Very early days. Digital Learning Services (my dept) lobbying for documented workflow. University pushing to formalise all online exams and tests. There has been a significant rise in the use of online exams throughout the university but no department has switched to online exams exclusively. We also use essay question types.”

“The use of online examinations is promoted within the institution. There is a significant variation across the institution. Some disciplines such as Dentistry and Pharmacy are make significant use of online exams, mainly at undergraduate level. At PGT level there is limited use.

The support infrastructure for online examinations has been developed over a number of years, including development of a secure eAssessment Desktop and to varying degrees additional eLearning support directed towards supporting and reviewing the set up of online examinations (eg MCQs, short answer questions). Online exams are 'owned' by the central Examinations Office, but depend upon a project approach involving staff from faculty eLearning teams, the central IT Services, Student Systems/Applications Team, other key players in ITS, and Student Services.”

WHICH OF THE FOLLOWING ARE YOU USING/CONSIDERING FOR ONLINE EXAMS?

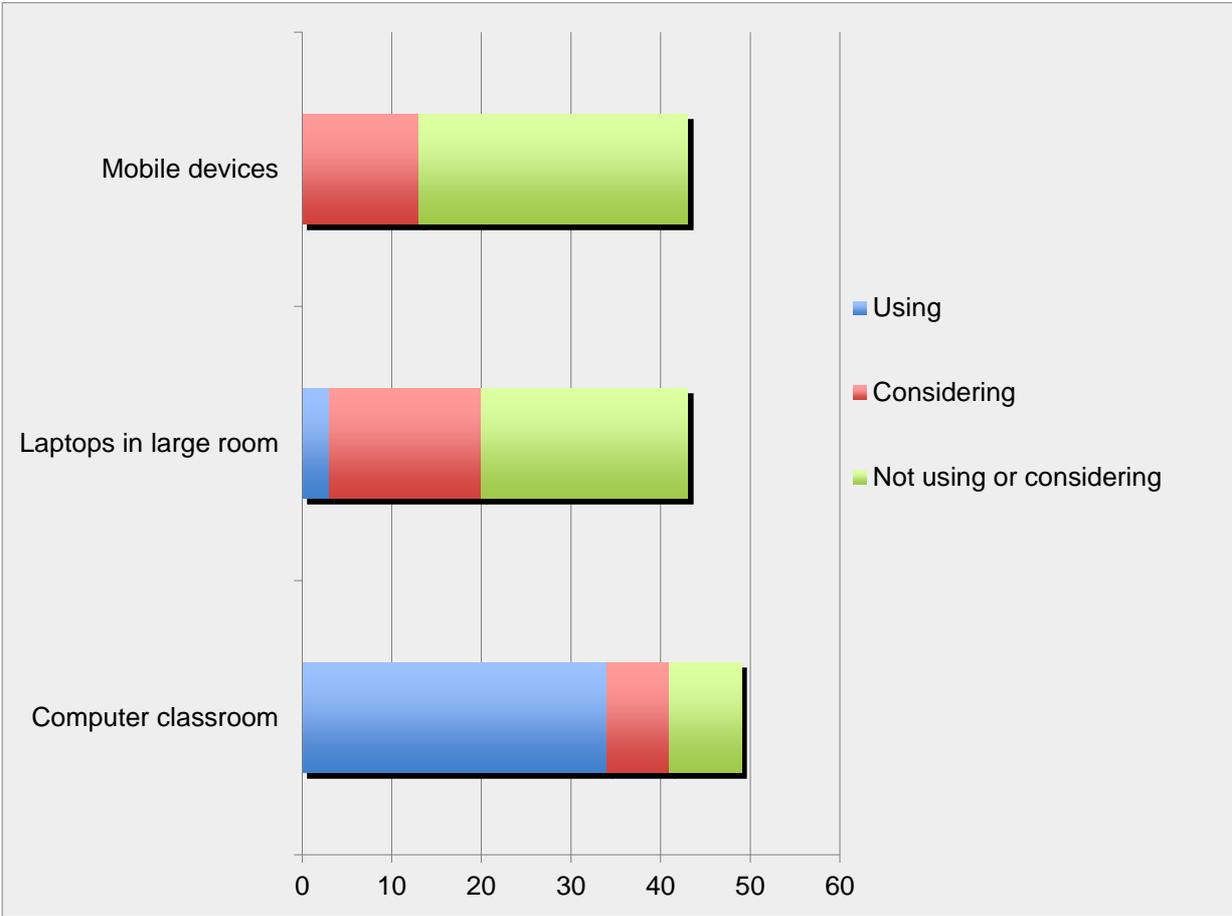


Figure 12: Which of the following are you using/considering for online exams?

	Using	Considering	Not using or considering	Response - Count
Computer classroom	34	7	8	49
Laptops in large room	3	17	23	43
Mobile devices eg Chrome books in a large room	0	13	30	43
Other				6
Answered question				50

The few (5) free text comments acknowledge the challenges associated with running online, summative examinations. For those institutions transferring online examination practices from paper to online, the key issues described are: functionality of software available to lock down user desktops as well as resource and logistical challenges – including pressure on computer labs and suites. Concerns and challenges with a wider rollout of online

examinations were also expressed in a recent webinar facilitated by the Jisc EMA project. (Ferrell, 2016b).

HeLF members described some solutions that are being explored, for example, laptops being made available to students with special requirements. Another institution is exploring a BYOD approach to reduce logistical and resource issues.

One institution described using some open examinations where

“students can take the exam anywhere within 1 week. Questions come from pools and questions sets categorised by topic and degree of difficulty ensuring all students have an equivalent experience. We also deliver an essay question at random via an online quiz and ask students to complete the question within a set period of time (hours).”

WHAT ARE THE CRITICAL SUCCESS FACTORS IDENTIFIED FROM YOUR OWN INSTITUTION'S EXPERIENCE OF IMPLEMENTING EMA?

There were 43 free text responses.

The comments revealed a variety of success factors which can be distilled into eight broad themes. Even within single institutions there were often a range of success factors that were identified. "Working with our Assessment Process Group, technology is only one part of the equation, needs to align with process/policy and practice."

DEMONSTRATION OF TANGIBLE BENEFITS

Student satisfaction, good practice case studies, and efficiency gains such as reduced workload and paper consumption and also faster marking leading to reduced turnaround time for marking assignments.

There was an interesting benefit that was also presented as an issue "Having a system that works seamlessly. While we have no formal policy about EMA, the fact that assignments automatically appear in the VLE and grades are passed back to the SRS means attempting to do something different requires some thought and time, and is strongly resisted by administrators who find the automated system time saving and efficient."

STAKEHOLDER ENGAGEMENT

Academic and administrative staff, and students need to be consulted. "Engaging all staff across the institution and providing sustained support and information during the transition period." "Do not underestimate the time needed to get hearts and minds on board."

LEADERSHIP AND INSTITUTIONAL CULTURE

Top-down leadership was considered particularly important as well as at the departmental level. "Support and drive at the executive level of the academic structure is key to go through the adoption stages."

Policies are considered key to setting expectations around EMA adoption and consistency of practice, but that these need to be supported by senior management.

Senior management also influences resourcing and investment in infrastructure. Examples are provided of dual monitors iPads purchased to support staff marking online. Equally, top-down failure to resource and support has in one case led to stagnation.

IMPROVING PROCESSES AND WORKFLOWS

There are references to assessment process mapping exercises and academic/administrative needs and requirements identified and made explicit. Assessment processes have to be clearly understood and workable with "Joined up practice between administrators and academics."

SYSTEM FUNCTIONALITY AND RELIABILITY

Processes and workflows can be easily derailed if the EMA systems in use do not provide supportive functionality or are considered unreliable. Limitations in the available technology

produce risks that assessment requirements are not being met. “Mapping and developing new processes including workaround procedures to overcome limitations in the technology.”

Seamless system integration is seen as a key success criteria “Marks entered only once; assignment information entered by academics in one place only; full integration between SRS & VLE”.

Systems that enable flexibility of processes across departments is as important as flexible academic practices around assessment “Providing a flexible system that supports different marking/ feedback methods and workflows, so that every department can use the system.”

STAGED ROLL-OUT OF EMA ACROSS THE INSTITUTION

A number of respondents mentioned the importance of a gradual rollout of EMA “Staged rollout e.g. student submission first, then marking and feedback, then expand to video and portfolios etc.”

SUPPORT AND TRAINING

Again, this was mentioned as key to success. “Front line support for students and teachers.”

MONITORING EMA ADOPTION AND PERFORMANCE

Monitoring for compliance against policy and also to identify where additional support many need to be targeted. “Monitoring data is indispensable to measure progress and target efforts.”

WHAT IS YOUR CURRENT AREA OF PRIORITY FOR DEVELOPMENT IN EMA?

45 respondents shared their priorities for developing EMA in their institution. Three broad themes were identified.

IMPROVING THE FUNCTIONALITY OF EMA (AND RELATED) SYSTEMS

The area of **highest priority** for institutions (19 responses) would appear to be **improved integration between student record systems (SRS) and the VLE** to (i) automate the creation of submission areas in the VLE and (ii) enable marks recorded in the VLE to be passed back to the SRS. A further **11 comments related to improved integration between all of the systems that contribute to EMA** e.g. improving the user experience through better management of processes, speed up the workflow process, and improve integration between Turnitin and/or media servers and home-grown systems. Three comments related to **overcoming challenges around online exams**. **Exerting influence on vendors to improve system functionality** was a priority for 2 respondents.

INCREASING ADOPTION OF EMA

Also continuing to be a priority is **increasing uptake of EMA within institutions** where the emphasis is on **persuading** academic managers and colleagues to use the technology for submission, marking and feedback (13 responses), **promoting and encouraging new forms of academic practice** e.g. use of rubrics, e-marking and e-feedback (4 responses) through staff development and practitioner case studies. Only one comment considered that **introducing a policy for institutional clarity** was a priority.

ANALYTICS AND DATA-INFORMED DECISION-MAKING

Ensuring that **EMA data is captured as part of institutions learning analytics developments** was a priority for 2 institutions. Using system data to inform decision-making is a priority for one institution which is looking to gather 'a historical view of all feedback across multiple assignments/ modules to identify repeat errors'.

FURTHER INFORMATION

Members were asked to provide further information about EMA in their university which was not covered in the survey. 16 responses were received. Four comments relate to question 5 so have been added under that section of the report.

The following 6 comments cover a range of challenges, drivers and achievements.

“Worth mentioning that the driver for EMA in this area has been the provision of feedback within 20 days.”

“Whilst the student and academic practices are now understood and resistance to marking/ feedback from academics is largely a thing of the past, the systems we have to use are still far off maturity - VLE, Tii and the grades journey SRS - VLE and back again. There is still a sense that UK HE assessment practices are poorly understood by system providers.”

“As different disciplines and schools used different assessment methods, we need to supply a variety of e-sub / e-feedback methods. When we do this - we get uptake. We have moved from 25% e-sub to over 80% without forcing through a policy. The student body feedback has been helpful.”

“Assessment and feedback and thus the EMA is providing long lasting added value for our institution and our students. Although we introduced EMA four years ago, there are still some debates and some excitement about it. We are still developing new features in the VLE and refining EMA processes that benefit the business, the teachers and the students. The advent of TEF and analytics will probably ensure that the trend will continue.”

“The most disappointing aspect of EMA for me has so far been the limitation of eFeedback due to a lack of willingness to take risk and support innovations. Feed forward and ipsative approaches are not considered because they are not enabled or rewarded by the institution. eFeedback is mainly driven by the desire to optimise existing feedback processes.”

“The key challenge for us remains how we respect anonymity in the EAM lifecycle. Current commercial solutions are still not robust enough in this regard”

It should also be noted that 6 comments made reference to the survey questions and in particular where these had not worked for them. These have been duly noted and will be fed into the next iteration of the HeLF EMA survey.

CONCLUSION

This snapshot of EMA adoption across UK HE is taken from the perspective of HeLF members and draws upon their experience and knowledge at the local level. Using the NUS (2016) and Jisc (2016a) benchmark descriptors as reference points, we tentatively conclude that as a sector, eSubmission is now entering the mainstream but that eMarking, eFeedback and eReturn are still very much 'under development' or limited to ad hoc, departmental or faculty initiatives.

There are very few institutions who have developed an integrated EMA approach over the entire workflow. The survey's quantitative and qualitative responses lead us to conclude that the sector is still at a very early stage of researching/ investigating how this can be made to work. The survey responses show that a seamless integration of systems throughout the whole of the EMA workflow has, however, been identified as a high priority.

Free-text comments revealed a range of critical success factors and these were organised under the following categories:

- Ability to demonstrate tangible benefits
- Stakeholder engagement
- Leadership and institutional culture
- Improving processes and workflows
- System functionality and reliability
- Staged roll-out of EMA across the institution
- Support and training
- Monitoring EMA adoption and performance

HeLF members also described their current priorities regarding EMA and these were placed in three categories as follows:

- Improving the functionality of EMA (and related) systems (including online exams)
- Increasing adoption of EMA
- Analytics and data-driven decision-making

Finally, what do these findings mean for HeLF and its members?

- They offer an 'as is' assessment of the current state of EMA across UK EH
- They describe the broad spectrum of EMA adoption against which it is possible to compare one's own institution's progress
- They suggest a logical evolution path for EMA systems and adoption
- They suggest areas where HeLF can work with and for its members in raising awareness of innovation and in offering further sharing of experience and support.

REFERENCES

Ferrell, G. (2016a) *Evaluating your readiness for electronic management of assessment: using our self-assessment tool*. Electronic Management of Assessment. Jisc.

<https://ema.jiscinvolve.org/wp/2016/09/02/evaluating-your-readiness-for-electronic-management-of-assessment-using-our-self-assessment-tool/>

Ferrell, G. (2016b) *Online exams webinar recording now available*

<https://ema.jiscinvolve.org/wp/2016/09/27/online-exams-webinar-recording-now-available/>

Neves, J. and Hillman, N. (2016) *The 2016 Student academic experience survey*. Higher Education Policy Institute, Higher Education Academy <http://www.hepi.ac.uk/wp-content/uploads/2016/06/Student-Academic-Experience-Survey-2016.pdf>

Newman, T., Beetham, H. and S. Knight. (2016) *Student digital experience tracker 2016: results from the pilot project*. Jisc

http://repository.jisc.ac.uk/6436/2/Student_digital_experience_tracker_pilot_report_-_June_2016_FINAL.pdf

NUS Assessment and Feedback Benchmarking tool.

<http://www.nusconnect.org.uk/resources/assessment-and-feedback-benchmarking-tool>