

# Paper Based Training - End Of An Era?

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## Introduction

Staff are the most valuable asset in the workplace and their training and development is crucial to the overall success of an organisation. From time immemorial, paper-based training has been the sole means used for staff development in Pathology. A network training audit at South West London Pathology (SWLP) established that paper-based training and competency assessment no longer aligns with the network's key organisational goal, 'to ensure and maintain a continuous competent workforce.' There are also significant issues with paper-based training, including cost, time, storage, difficulties in monitoring and maintenance, and impact on carbon footprints. The introduction of an e-Learning management system (e-LMS) has revolutionised learning and development at SWLP. Digitalisation of training and competencies has eliminated all the limitations associated with paper-based learning and has brought about a renewed motivation among staff and an invigorated culture at SWLP. At SWLP, the e-LMS incorporates both online and laboratory-based learning and contains outstanding functionality such as interactive e-learning in varied teaching formats, automated assessment marking, lapsing competence notifications, competency status visibility in real-time, customisable validity reports for the status of an individual, pathology discipline, analytical platform or network as a whole, a feature which is valuable for UKAS examinations. Staff have 24/7 access to their training and competencies on the cloud-based system, from any electronic device.

## Methods

The network-wide training audit provided detail on compliance of individuals, speciality and competency.

Investment was made on a digital platform. Programmes were built to include e-learning with soft questions to check for engagement/learning, evidence of SOP reading, trainer demonstrations, trainee observations with the ability to upload evidence and assessments. Programmes were built for procedures as well as knowledge. Staff compliance was then assessed to see if it had increased from the original audit.

After a year, a survey was carried out to evaluate the benefits and changes comparing paper-based and digital training and competence. The users sampled included learners and tutors and questions were designed to cover all features of the e-learning platform. For this study, we chose two poorly performed competencies, temperature monitoring- Kelsius and Cobas P612-P471, and compared the compliance rates between the two paper-based and digital training.

## Results

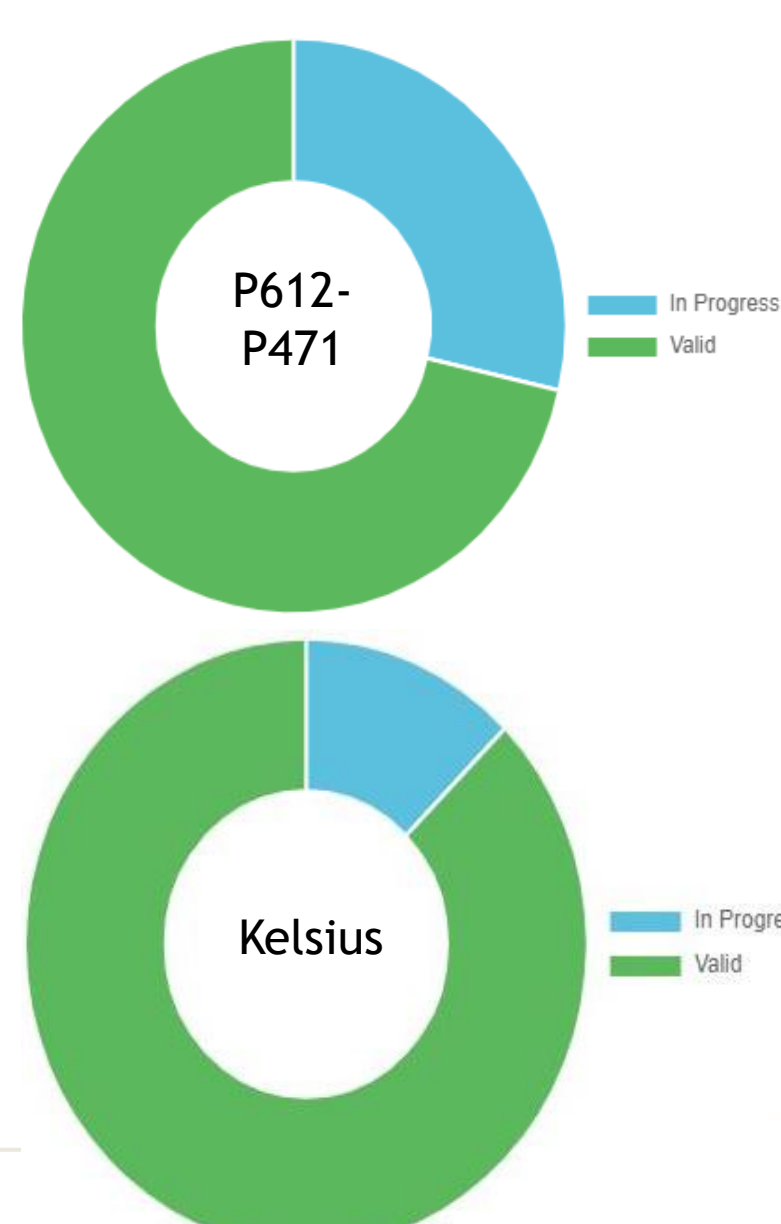
In our study, we compared the old (Paper-based) method of training with the new (digitised) training method using staff competency compliance in two analytical processes, namely P612 and Kelsius temperature monitoring.

The competency achievement rate attained for both P612 and Kelsius using paper-based training was 10%. Alternatively, digital training achieved a competency score for P612 of 71% and 86% for the Kelsius temperature monitoring competency.

The staff survey revealed that for trainees, on average, it took 27% less time to complete the programs than on paper and trainers utilised 36% less time to assess trainees on the digital format.

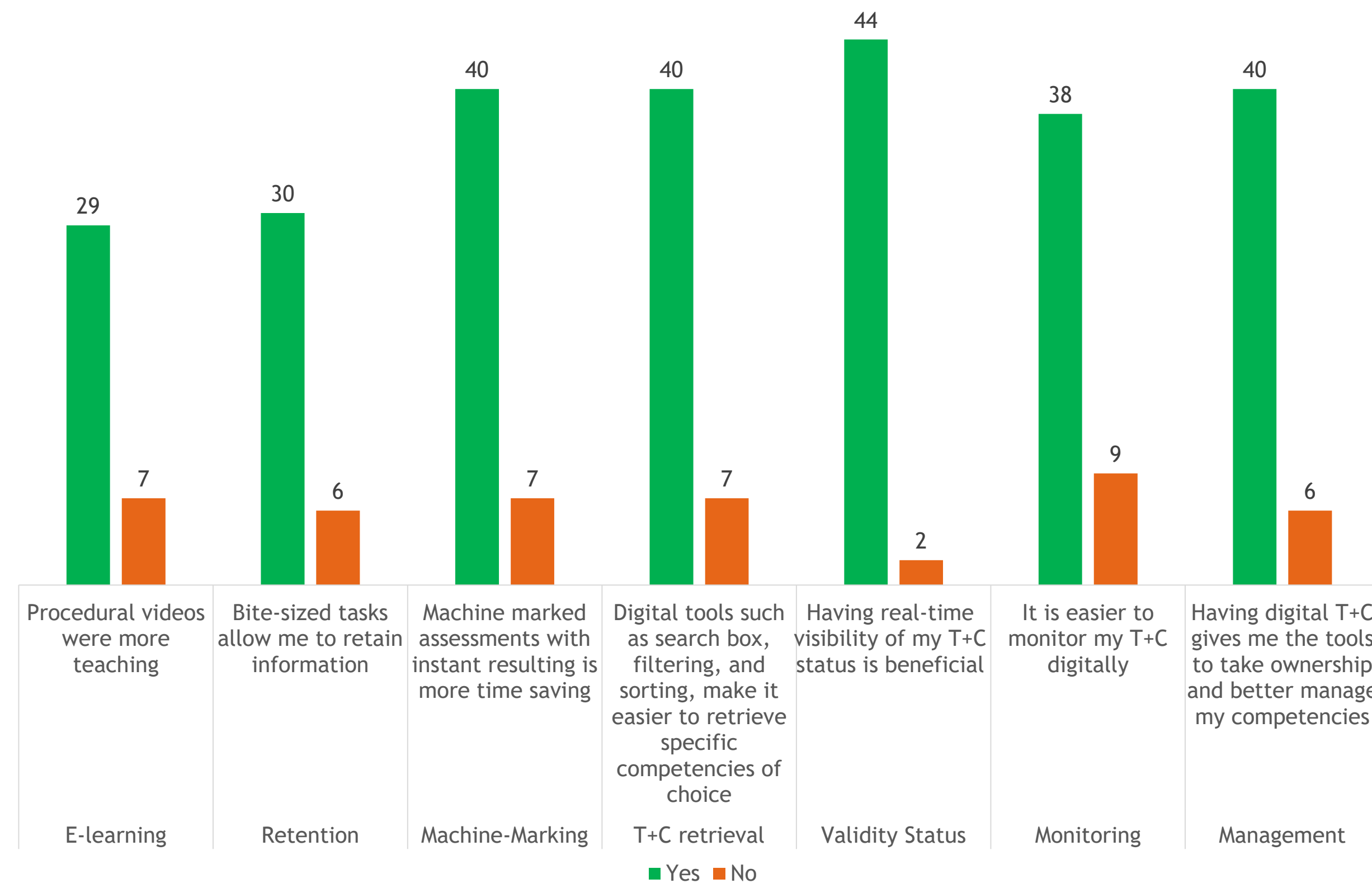
The positivity scores indicating agreement for all the themes (such as e-learning, Information retention, Mode of marking, Validity status, competency monitoring and management) evaluated in the learner survey ranged from 29 to 44 while disagreement scores ranged from 2 to 9. This was also the case for the Tutor response in the survey.

Competency e-Programme	Paper-based % Validity	Digital % Validity
Cobas P612-P471	8%	71%
Temperature Monitoring - Kelsius	9%	86%



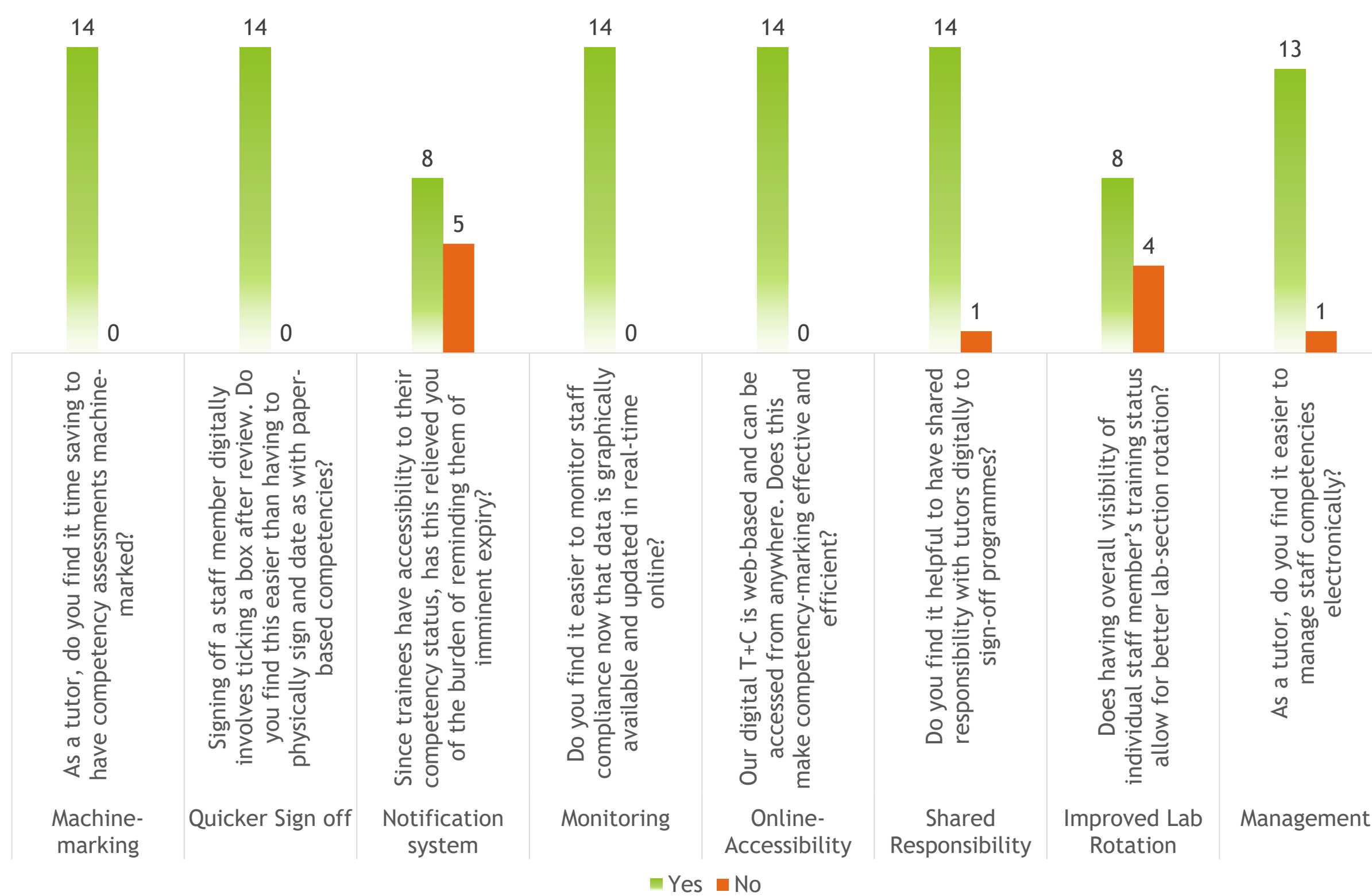
## Learner Survey

Learner Evaluation of Electronic Training and Competency (T+C) compared to Paper-based



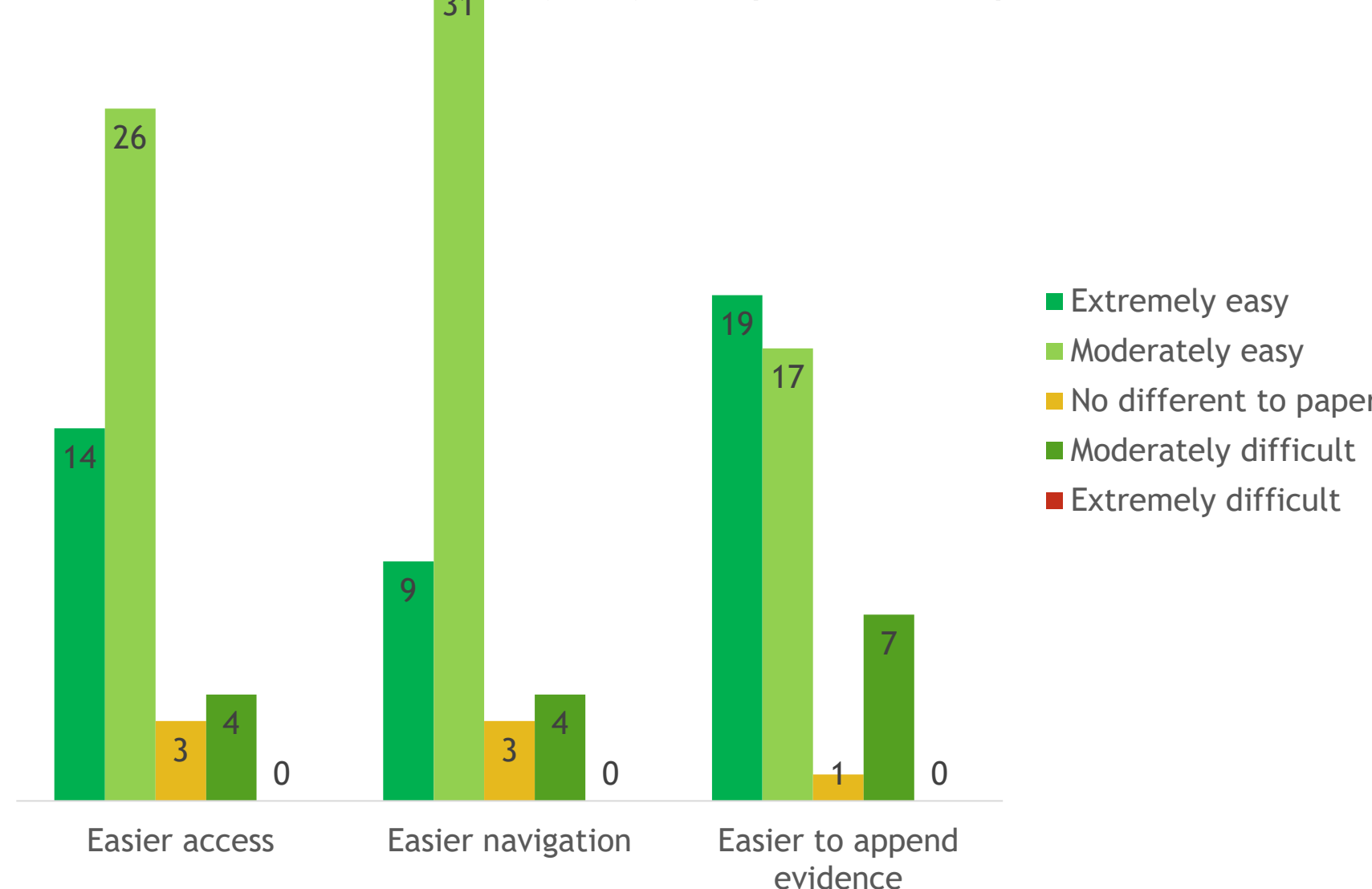
## Tutor Survey

TUTOR EVALUATION OF ELECTRONIC TRAINING AND COMPETENCY (T+C) COMPARED TO PAPER-BASED



## Overall Survey

Evaluation of Electronic Training and Competency (T+C) compared to Paper-based



PRIMARY PLAN							
Speciality: Biochemistry			Programme Name: P612				
Training & Competency Process Flow							
This is an example of a P612 programme time saving using Digital platform for training and competency							
Paper format:			Digital Format:				
Step	Activity	Senior (mins)	Staff (mins)	Step	Activity	Senior (mins)	Staff (mins)
1	Organisation of scheduling Trainee and Trainer pa	5	5	1	Organisation of scheduling Trainee and Trainer pa	5	0
2	Issue of Training log	10	10	2	Issue of Training log	6	0
3	Updating and monitoring of training spreadsheet	10	10	3	Updating and monitoring of training spreadsheet	0	0
4	Introduction of topic	15	15	4	Introduction of topic	40	40
5	SOP reading	0	30	5	SOP reading	0	30
6	one to one demonstration	120	120	6	one to one demonstration	60	60
7	One to one observation	100	100	7	One to one observation	100	100
8	Completion of competency assessment	0	60	8	Completion of competency assessment	0	20
9	Marking of competency assessment	30	0	9	Marking of competency assessment	0	0
10	Competency assessment feedback	35	35	10	Competency assessment feedback	10	10
11	Evidence gathering and Sign-off	30	40	11	Evidence gathering and Sign-off	20	45
12	Filing, storage and updating of training log	10	5	12	Filing, storage and updating of training log	0	0
13	Monitoring and scheduling on-going competency	20	0	13	Monitoring and scheduling on-going competency	5	0
<b>Total Time</b>		<b>385</b>	<b>420</b>	<b>Total Time</b>		<b>246</b>	<b>305</b>

## Discussion

Most responders were satisfied with the platform praising its ease of use, the remote and 24/7 availability of e-learning and data and the automated compliance and tracking as well as the notification system and validity outlook.

In summary

- Digitalising training and competency has shown to save time for both trainers and trainees, as evidenced using a roll template.
- Survey outcomes show that digital platform also provide ease of access, navigation and monitoring of competencies in real time for both Trainers and Trainees.
- Digital platforms facilitate uploading of evidence. This eliminates the time spent on looking through the folders collecting evidence when assessing practical competency. It also provides safe storage eliminating duplication.
- Automatic marking of assessment has demonstrated to reduce the administrative burden on tutors, and it allows trainees to receive instant feedback and results.
- Colour-coded visibility, which can be broken down into groups and presented with graphs, allow for a quick overview of individual's departments or programme's competency status.
- Enhanced compliance of (percentage) can be clearly observed when using digital platform compared to paper form, this is evidenced by the audit performed.

Overall, the comparison study shows the new platform has been a success. It's improved efficiency and effectiveness and been well-received by trainees and trainers. It has proven to be streamline and enhance staff competency while minimising lapse gaps and saving time for both trainees and trainers. Additionally, it contributes to environmental conservation through reduced paper usage.

## References

- SWLP 2022 Vertical Training Audit
- SWLP Digital Training Platform