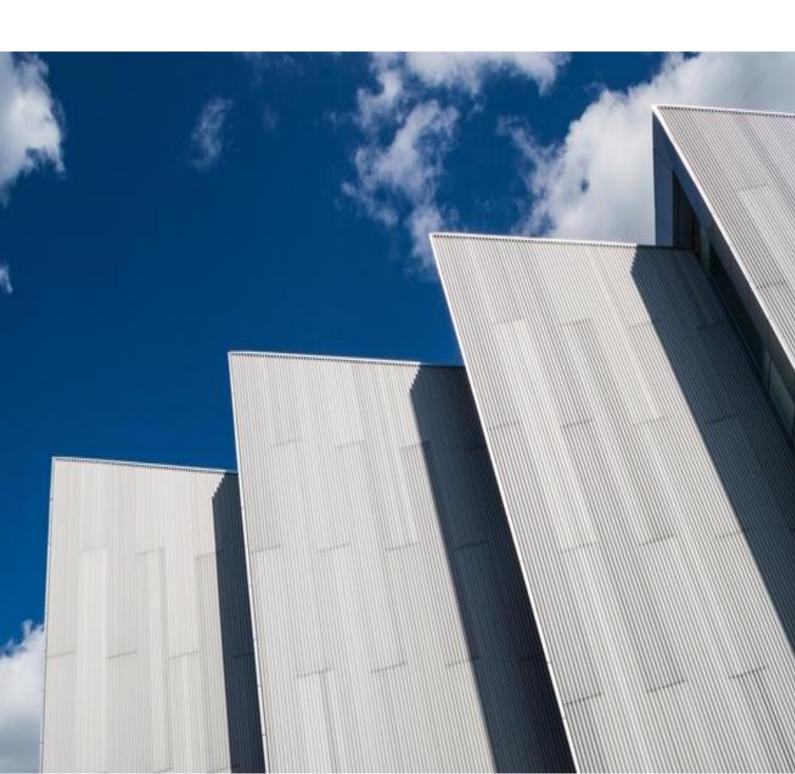
#### TRAINING PROVIDER NETWORK

# E-learning and e-assessment policy



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#### Introduction

The increasing use of technology within the vocational education sector for the development, delivery, administration and reporting of e-learning and e-assessment requires a robust and consistent approach to the use of technology that delivers safe and reliable results.

This document sets out CITB's requirements that address the use of e-learning and e-assessment, where it is felt that CITB needs to apply a standardised and consistent approach.

This document has been written to support the specific nature of this delivery media and intended to support flexibility and encourage innovation. This document must be used in conjunction with the following documents, where applicable.

- CITB Training provider handbook
- CITB Assured category for short duration standards
- CITB Recognised category for short duration standards
- CITB Licensed category for Site Safety Plus (scheme rules, Quality assurance requirements).

These documents are produced and changed from time to time by CITB and available at <a href="https://www.citb.co.uk">www.citb.co.uk</a>

All members of the CITB training provider network and 3<sup>rd</sup> Party organisations are expected to comply with these requirements wherever technology has been used to assist the delivery of a short duration training standard in part or in full and where the technology enables the assessment of a short duration standard.

Quality assurance of e-learning and e-assessment systems will be incorporated with approval, self-assessments and monitoring visits. Training providers and 3<sup>rd</sup> Party organisations will be required to address any actions highlighted during these quality assurance interventions.

A list of legislation, industry standards and best practice is included at the back of the document.

# Aims and Objectives

#### CITB aims to:

- Use technology that meets an equivalent standard to a traditional classroom-based training course whilst encouraging flexibility and innovation
- Encourage the uptake of innovative forms of learning and assessment.
- Ensure training providers and 3<sup>rd</sup> party organisations approach e-learning and e-assessment are robust.
- Ensure the integrity, reliability and validity of e-learning and e-assessment are upheld and facilitate and support innovative training and assessment practice.
- Ensure that quality assurance of e-learning and e-assessment reviews the following principles.

**Relevant**- The course outputs genuinely meet the requirements of the training standard.

**Reliable-** The course produces the same results irrespective of the time, location, cohort or context under which the e learning/e assessment is delivered.

**Efficient-** The system is high quality and easy to use and facilitates the entry of all delegates.

**Positive-** The system and course is trusted by delegates and employers and delivers the right outcomes. The experience is open, transparent and accessible.

**Learning-** Continuous learning and review is part of a cyclical plan for the Training Provider and/or 3<sup>rd</sup>-party.

# Scope

This document details the requirements for developing and operating e-learning, e-assessments and their supporting systems for training providers and 3<sup>rd</sup> party organisations.

E-learning and e-assessment for the purpose of this document is defined as the use of electronic systems for the development, operation and delivery of learning materials and assessments which contribute to the achievement of a short duration standard.

In addition, the implications of using electronic means for the generation, delivery and administration of learning and assessment or the calculation of results are included in the scope of what is quality assured,

CITB will examine the extent to which the quality assurance of e-learning and e-assessment is needed through consideration of the purpose of the course and outcome of the achievement for example leads to a competence card or 'CPD knowledge update'.

# Examples of e-Learning

The term e-learning denotes any type of learning that has an electronic component and incorporates one or more of e-learning, e-testing and/or e-assessment. The following examples of e-learning illustrate the potential scope and range of different applications, this list is not exhaustive.

- Learning that is distributed, completed and administered electronically using the intranet or local workstations.
- Learning that is distributed, completed and administered electronically using the internet

#### **Examples of e-Assessments**

- Assessments-comprising a combination of automatic marking or manual marking that are delivered in either of the two ways above.
- Electronic test delivery, with all marking completed manually on screen.
- A range of multimedia formats for submitting an assessment or test.
- Tests downloaded by the training provider from the internet.
- Delivery of training and assessments and submission of completed assessments by secure email.
- Assessments that are automatically marked and react adaptively to delegate's performance.

Training providers and standards owners must carefully consider the following principles of how they, together with their technology partner(s), can ensure effective and robust methodologies, together with valid and reliable infrastructure and system capabilities as detailed within this document.

#### Validity and Reliability of e-assessment and e-learning

Training providers must ensure that assessment and learning delivered and maintained by electronic media is fit for purpose and produces a robust, valid and reliable method of testing a delegate's knowledge and understanding. The choice of assessment and learning method should be independent of the technology on which it is based.

- 1. Training providers must ensure that the e-assessment and e-learning is fit for purpose and does not compromise the assessment methodology and the integrity of what is being taught or assessed. The assessment must only test the knowledge and skills needed to achieve the standard. Technology must not be a barrier to the ability of a delegate to access e-learning or e-assessment.
- 2. E-learning and e-assessment systems must maintain the integrity and validity of the assessment by following the existing scheme rules that support specific short duration standards, CITB products and/or qualifications.

### Security

Training providers must maintain and review the security of e-learning and/or e-assessment systems to ensure authentic test outcomes and protect against corruptive influences. Procedures must be in place to assure the security of hardware and software and the integrity of content and data feeds.

- 3. The data security arrangements for e-learning and e-assessment must comply, where relevant, with current legislation and industry standards, see (Appendix 1) for a list of the current legislation and standards.
- 4. Training providers must ensure that the e-learning and e-assessment systems have safeguards in place designed to ensure the security of all aspects of e-learning and e-assessment and their processes, including plagiarism, copying and interference with any test outcomes.
- 5. E-learning and e-assessment systems must include adequate protection, such as software and/or firewalls that will protect against viruses and hacking, and monitor and block attempts to corrupt the learning and/or assessment process.
- 6. Training providers must ensure that, through their technology partner, the following areas are addressed in the development of any e-learning system:
  - Developing appropriate authentication processes.
  - Differentiating users on the basis of permissions and rights of access.
  - Protecting the systems areas so that only correctly authenticated users can access certain parts of the system.
- 7. E-learning and e-assessment systems must have the functionality to provide accurate audit trails and reports of system use and activity.
- 8. Training providers must give due consideration to the physical security of e-learning and e-assessment hardware. E.g. Servers.
- 9. Training providers must have policies and procedures in place to protect the hardware and software used to deliver e-learning and e-assessment and the network in which it operates.
- 10. Training providers must have procedures in place that will protect the integrity of test data before and after the assessment has taken place and whilst being transmitted to and from the training provider, e.g. through encryption or authentication of esignatures in line with current relevant legislation and industry standards, see appendix 1.
- 11. Where a Training provider has entered into an agreement/arrangement with any provider, they must have in place a service level agreement or licence arrangements that make clear each parties responsibilities including security.

12. As good practice the e learning and e-assessment system must calculate results automatically by the system and delivered securely to the delegate.

#### Data integrity – input and output

The training provider must be confident that systems have been thoroughly tested and to ensure that they have sufficient capacity to store, retrieve, generate and share all necessary data. This includes, but is not limited to, the ability to exchange data securely with other internal and external systems, as required, without endangering or compromising the integrity of the data.

- 13. Training providers must be confident that there is sufficient capacity to hold all necessary data and those systems operate successfully. Training providers must ensure that effective testing of system capacity has taken place.
- 14. Training providers must put in place systems to monitor, review and correct any anomalies that occur to data input or output and to measure the accuracy of what is generated. This must be incorporated into the training providers quality assurance procedures.
- 15. Training providers must have secure and robust data storage, archiving and retrieval arrangements in place including effective and secure interfaces with service providers that is managed through an effective service level agreement or contract.
- 16. Training providers must ensure through system testing and regular review that results which are automatically calculated and generated by the elearning system are accurate and secure.

#### Operation of e-learning and e-assessment systems

E-learning and e-assessment systems must be stable and work reliably to generate valid and reliable results. They must be demonstrably consistent with relevant standards of good practice and be easy to navigate.

- 17. Training providers must ensure that e-learning and e-assessment systems are sufficiently robust to support learning, assessments and/or testing.
- 18. E-learning and e-assessment systems must include functionality to generate key information including but not limited to delegate details, results, performance reporting and statistical data.
- 19. The system must have a robust method of monitoring and recording delegates online activity and behaviour whilst undertaking training and testing, including but not limited to:
  - Time taken to complete the course
  - Results of exams

- Time taken to complete exams and number of attempts
- Login and Logoff dates and times

### Integrity of e-learning systems

Systems must allow for flexibility considering technological development. System testing must be thorough and be reviewed at regular intervals once the system is operational. Training providers must ensure that suitable support facilities are in place for delegates and that there is a contingency plan should any part of the system fail.

- 20. Before implementation the training provider must undertake full system testing. Testing should include functionality and capacity for concurrent users and use lessons learnt to make improvements.
- 21. Training providers must have procedures in place to undertake regular system testing for reliability and keep under review once the e-learning and e-assessment system is in operation.
- 22. Training providers must ensure that any software is developed specifically for the purposes of e-learning and e-assessment is compatible with operating systems so not to disadvantage delegates.
- 23. Training providers must ensure sufficient support is available between the service provider and system users to prevent any delegate being disadvantaged.
- 24. Training providers must have facilities to carry out daily database backups and have in place a robust disaster recovery plan.

## Access to e-learning

Training providers must ensure that policies and procedures comply with the Equality Act so as not to discriminate against any delegate on the grounds of accessibility.

- 25. Training providers must consider early in the development phase of e-learning and e-assessment material to the ways in which they manage and consider delegates that have a special assessment requirement. This will include business planning, product design, development, product specification and choice of product. It must also be compliant with the prevailing Equality Act.
- 26. Training providers must have a particular considerations and reasonable adjustment policy that details how adjustments will be considered and provided in a consistent manner.
- 27. Training providers must consider early in the development phase of e- learning and e-assessment the requirements of delegates with special assessment requirements including but not limited to font size, readers and layout in line with recognised quidelines (appendix 1).

### Preventing barriers to entry for e-learning

Training providers must ensure that technology is intuitive and does not create a barrier for any user. Provision must be made for delegates with access arrangements and/or reasonable adjustments.

- 28. Training providers must make available the use of technology for the benefit of all delegates by providing an intuitive system for delegates that promotes learning and assessment from a variety of locations. There should be clear guidance and details of available support facilities.
- 29. Training providers must allow for familiarisation prior to using the system for live sessions of learning. This could be through a preparatory module or tutorial. The system should not inhibit a delegate's performance.
- 30. E-learning must provide a usable interface and be easy to navigate.
- 31. The system must be capable of adjusting assessment and/or test times in line with any reasonable adjustments policy.

#### Business continuity and disaster recovery

Training providers must have suitable measures in place to ensure business continuity to address service availability interruption and the need for disaster recovery for their e-learning and e-assessment services and systems, in the event of system failure. This management should be underpinned by measures to identify potential risks to those services and systems so that they can be managed to minimise disruption.

- 32. Training providers must implement risk management procedures to provide early identification of risks to the operation of e-learning and e-assessment systems and enable action to be taken to minimise the impact of those risks, in line with recognised standards of good practice.
- 33. Training providers service level agreements with service providers for their e-learning and e-assessment systems must consider how the system will interface with other systems and service providers, as far as reasonably practicable, to enable adaptability in the contracting of services and to help manage risks and dependencies in the event of a system's failure.
- 34. Training providers must put in place a disaster recovery programme that sets out how the operation of their e-learning and e- assessment systems and services will restart after a significant failure.
- 35. Training provider disaster recovery plans must demonstrate how the access to alternative, convenient, fully equipped services and facilities will be provided. This must include, but not be limited to, how service will be resumed in line with the training providers defined priorities and within timescales, after the disaster has occurred.
- 36. Where the e-learning and e-assessment is provided for the training provider by a 3<sup>rd</sup> party awarding organisation, there must be comprehensive reciprocal strategies for back up and contingency scenarios in light of a system failure at the centre.



#### Automatically generated on demand tests

Training providers must ensure that there is a sufficient volume of assessment items or questions to provide consistent secure, robust, balanced and unique on-demand tests, appropriate to the requirements of the standard.

- 37. Where training providers use electronic assessment item banks to automatically generate on demand tests they must ensure, by thorough testing, that there are sufficient assessment items to provide consistently robust, balanced and unique test papers for the assessment/test windows to be accommodated.
- 38. Where electronic assessment item banks are used to automatically generate individual on demand tests, approved training organisations must ensure that the scrutiny of assessment items are not compromised by the level of use by ensuring that there are sufficient items available to accommodate the expected delegate volumes.
- 39. Where the electronic assessment item or question banks are used, training providers and 3<sup>rd</sup> party organisations must ensure that each item that contributes to measuring the achievement of the standard is consistent and comparable with others over time for each session.
- 40. Where delivery of test items or questions is randomised, training providers and 3<sup>rd</sup> party organisations must have policies and procedures in place to analyse the potential impact of the randomisation on delegates' performance and to ensure that question order does not bias the results.
- 41. Automatically generated on-demand tests must be appropriately designed to afford learners with particular assessment requirements and equal opportunity.

#### **Test Conditions and Test Environment**

Training providers and 3<sup>rd</sup> parties must have policies and procedures in place to ensure that the controls on test conditions in relation to on-demand testing, invigilation, secure test environments and health and safety.

- 42. Training providers must ensure that controls on test conditions in relation to the extent to which on-demand testing is available to ensure that the security of the assessment is not compromised by the volume of delegates using the tests.
- 43. Training providers and 3<sup>rd</sup> parties must ensure and warrant the management of ondemand testing environments in terms of any additional requirements specific to the use of technology for testing, and any new skills or support that could potentially be required by the training providers invigilators is identified and provided.



- 44. Training providers must ensure that they have policies in place that address the need to manage the secure test environment in relation to the use of technology for assessment, for example in terms of network security and data integrity in their test locations.
- 45. Training providers and 3<sup>rd</sup> parties must ensure the test environment and conditions are compatible with health and safety legislation and their obligations under law.

## System Familiarisation for Trainers, Testers, Invigilators and administrators

Provider training and support for training provider system users, such as familiarisation sessions and guidance for all staff involved in e-learning and e-assessment.

- 46. Training providers must provide examiners, moderators, administrators and invigilators with familiarisation sessions or facilities, so that they have sufficient knowledge and understanding of the testing software. Training providers must have clear guidance on the correct support contacts available for all elements of the system.
- 47. The system must allow for the delegate to practice prior to any test to ensure they understand how the system and test will proceed under test conditions.

## Design, Development and Delivery of e-learning and e-assessment Material

- 48. Training providers and 3<sup>rd</sup> Party Recognised Organisations can develop electronic assessment and training material where the short duration standard expressly states the e-learning and/or blended learning is a valid method of delivery. For the avoidance of doubt, if the short duration standard does not state e-learning as a delivery method, approval will not be granted.
- 49. The duration of any course designed to be delivered by e-learning must have at least 50% of the total hours stated in the short duration standard for a traditional classroom delivery and meet all the learning outcomes and assessment criteria.
- 50. The training provider will be required to provide demonstrable evidence that the course will meet the minimum requirements for delivery time, and evidence of testing and any due diligence that supports the approach.
- 51. Any course designed to be delivered by a mix of e-learning and traditional classroom delivery (blended learning), must be at least 75% of the total hours stated in the standard and cover all of the learning outcomes and assessment criteria.
- 52. For blended courses, where the short duration standard details an exception to the 75% rule, courses can be designed to meet the discrete requirements of the individual short duration standard.



- 53. The course must be designed so that it prevents the delegate skipping any elements/pages of the course.
- 54. Where a course is modular, the system must ensure that all elements of the course have been covered prior to completion of any assessment, except where the assessments are at the end of each module.
- 55. E-learning and e-assessment platforms must include a mechanism for the inclusion of a statement of course limitation so the delegate understands the limitations of the methodology. See example below.
- E-learning, while offering flexibility and accessibility, has limitations. These
  include potential issues with technology access and reliability, challenges in
  replicating the social interaction of traditional classrooms, and varying
  effectiveness for different types of learning content. Furthermore, delegates
  need strong self-motivation and self-discipline, and accessibility for all delegate,
  particularly those with disabilities, can be a challenge to ensure.
  - 56. CITB's Quality Assurance team will review e-learning and e-assessment material as part of the self-assessment and approval process. Courses and systems that fail to meet the requirements will not receive approval and will not be grant eligible.