

End-point assessment plan for Textile Technical Specialist apprenticeship standard

Apprenticeship standard reference number	Apprenticeship standard level	Integrated end-point assessment
ST0581	4	No

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Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Textile Technical Specialist apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to Textile Technical Specialist apprentices, their employers and training providers.

Full time apprentices will typically spend 24 months on-programme (before the gateway) working towards the occupational standard and complete the required off-the-job training in line with the apprenticeship funding rules. All apprentices must spend a minimum of 12 months on-programme.

The EPA period should only start, and the EPA be arranged, once the employer is satisfied that the apprentice is deemed to be consistently working at or above the level set out in the occupational standard, all of the pre-requisite gateway requirements for EPA have been met and can be evidenced to an EPAO. Apprentices must have compiled a portfolio of evidence that will support the EPA professional discussion.

Apprentices will have achieved English and mathematics qualifications in line with the apprenticeship finding rules.

The EPA must be completed within an EPA period lasting typically three months, after the EPA gateway.

An approved EPAO must conduct the EPA for this apprenticeship. Employers must work with the training provider to select an approved EPAO from the apprenticeship providers and assessment register (APAR).

The EPA consists of two discrete assessment methods.

The individual assessment methods will have the following grades:

Assessment method 1: Workplace observation and questioning

- fail
- pass
- distinction

Assessment method 2: Professional discussion (supported by a portfolio of evidence)

- fail
- pass
- distinction

Performance in the EPA will determine the overall apprenticeship standard grade of:

- fail
- pass
- distinction

EPA summary table

On-programme (typically, 24 months)	<ul style="list-style-type: none"> • complete training to develop the apprenticeship's standard's knowledge, skills and behaviours (KSBs) • complete training towards English and mathematics qualifications in line with the apprenticeship funding rules • compile a portfolio of evidence
End-point assessment gateway	<p>The employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard</p> <p>The apprentice must:</p> <ul style="list-style-type: none"> • have achieved English and mathematics qualifications in line with the apprenticeship funding rules • confirm they are ready to take the EPA • compiled a portfolio of evidence, to support the professional discussion
End-point assessment (which will typically take three months)	<p>Assessment method 1: Workplace observation and questioning</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • fail • pass • distinction <p>Assessment method 2: Professional discussion (supported by a portfolio of evidence)</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • fail • pass • distinction <p>Overall EPA/apprenticeship graded:</p> <ul style="list-style-type: none"> • fail pass • distinction

Professional recognition	Aligns with recognition by The Textile Institute - Licentiateship Member
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Length of end-point assessment period

The EPA will be completed within an EPA period lasting typically of three months, after the EPA gateway.

Order of assessment methods

The assessment methods can be delivered in any order. The result of one assessment method does not need to be known before taking another.

Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

Apprentices must have confirmed they are ready to take the EPA. They must have achieved English and mathematics qualifications in line with the apprenticeship funding rules.

For the professional discussion (supported by a portfolio of evidence), the apprentice will be required to submit a portfolio of evidence – see requirements below.

Portfolio of evidence requirements:

The portfolio of evidence must demonstrate the knowledge, skills and behaviours assessed by the professional discussion as set out in the mapping of assessment methods.

The portfolio of evidence is used as an aide memoir during the professional discussion. It should be an example of work completed during the apprenticeship that the apprentice can quickly refer to support the answers that are being given.

Apprentices must compile the portfolio of evidence prior to the gateway and it should contain evidence collected during the on-programme period of the apprenticeship.

The portfolio will typically contain 12 pieces of evidence.

Evidence must be mapped against the professional discussion KSBs. Evidence may be used to demonstrate more than one KSB; a qualitative as opposed to quantitative approach is required.

Evidence sources may include:

- workplace documentation, for example job cards or job sheets, check sheets or quality check records, accident records, equipment check or maintenance records, sales records
- annotated specifications, for example drawings, cutting lists, work instructions
- annotated photographs
- CPD (Continuing Professional Development) records, feedback from colleagues

This is not a definitive list; other evidence sources are allowable.

The portfolio of evidence should not include any methods of self-assessment. Any employer contributions should focus on direct observation of evidence (for example witness statements) of competence rather than opinions. The evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer confirming this.

The apprentice's manager/mentor will typically support the development of the portfolio in accordance with company policy and procedures, although the EPAO will provide further guidance on the content.

To enable the independent assessor sufficient time to plan, apprentices must submit their portfolio to their EPAO at the gateway and at least two weeks before the scheduled professional discussion.

The portfolio will not be directly assessed but will underpin the professional discussion.

Assessment methods **Assessment method 1: Workplace observation and questioning**

Overview

This assessment method has one component: observation and questioning.

The rationale for this assessment method is:

- this is a practical occupation, best demonstrated through observation
- it enables holistic assessment of KSB's
- observation allows the assessment of work tasks in a normal place of work, using tools and equipment with which the apprentice is familiar, which is likely to enable the apprentice to perform at their best
- observation is a cost-effective assessment method, as it makes use of the employer's premises and resources
- the tasks chosen reflects something that would be completed by a Textile Technical Specialist on a regular basis
- the questioning component enables the checking of underpinning knowledge and behaviours

Delivery

Apprentices must be assessed against the KSBs assigned to this assessment method – as shown in the mapping of KSBs.

Apprentices must be observed by an independent assessor completing work in a live workplace under normal working conditions using equipment and tools with which they are familiar.

The EPAO must arrange for the observation and questioning to take place, taking into account workplace operations and schedules. The employer must ensure the correct assessment conditions, materials and equipment/tools are available.

An independent assessor may observe up to a maximum of one apprentice at any one time, to allow for quality and rigour. Questioning must be completed on a one-to-one basis between the independent assessor and apprentice.

The observation and questioning must take 2.5 hours, following the structure below.

- Workplace observation: 120 minutes
- Workplace questioning: 30 minutes

The independent assessor has the discretion to increase the time of both the observation and questioning by up to 10% to allow the apprentice to complete a task or answer a question respectively at the end of the assessment.

The observation may be split into discrete sections held over a maximum of one working day. The length of a working day is typically considered to be 7.5 hours.

There may be breaks during the observation to allow the apprentice to move from one location to another and for meal/comfort breaks. During these breaks, the clock must be stopped and restarted to ensure that the assessment duration is not reduced. The apprentice must not communicate with anyone else during any breaks. EPAOs should consider whether it is possible and practical to assess one candidate in the morning and one in the afternoon to maximise assessor time on site and reduce cost.

In advance of the assessment, apprentices must be provided with information on the format of the assessment, including timescales; this briefing time is exclusive of the assessment period.

The following activities must be observed during the observation for ALL apprentices:

- Manage team operations in machinery/equipment, ensuring safe and efficient production.
- Read and interpret instructions from the job instructions and articulate expectations to the production team.
- Changeover/clean down/maintenance of machine/equipment.
- Oversee appropriate completion of production records by the team to guide and lead shift changes and handovers.

- Identify and solve problems for example, actions taken to minimise downtime and stoppages which may be covered by scenario-based questioning if it does not occur naturally.
- Lead and plan production activities.

The skill of fault finding may be assessed through questioning if this does not occur naturally during the observation, questioning relating to this skill must be completed during the time period for the observation.

Activities relating to the apprentices chosen options must be observed, as below.

FOR WEAVING OPTION:

- Set up, configure and prepare loom for textile production.
- Adjust loom settings and speeds to suit work instruction.
- Maximise capacity, capability and tolerances on three looms.
- Insert healded warp into weaving machine (loom) and secure shedding system.
- Carry out warp and weft tensioning.
- Demonstrate and manage three machines to ensure production efficiency.

FOR FINISHING OPTION:

- Set up, configure and prepare finishing machine for textile production.
- Adjust settings, control systems and temperature and water flow to suit work instruction.
- Carry out fabric cropping on piece ends and undertake cylinder cutting.
- Undertake decatizing process on fabric.
- Undertake weft straightening processes and manage autoclave machine settings.
- Monitor production and prepare finished fabrics for despatch.

Typically, the observation will be covered within one task using textile manufacturing machinery (weaving or finishing machinery). Should the equipment break down, the test will be temporarily stopped, so as not to disadvantage any one learner from another.

The independent assessor must ask a minimum of eleven open questions. Questions must be asked after the observation (30 minutes). They may ask follow-up questions where clarification is required. The purpose of the questioning is to assess underpinning knowledge and behaviours. All apprentices must have the opportunity to demonstrate any relevant pass and distinction grading criteria that rely on questions being asked (eg. Explains, compares, suggests, justifies etc). EPAOs must provide independent assessors with sample questions however, they can be adapted based on what they have observed.

Apprentices are expected to understand and use relevant occupational language.

The apprentice may choose to end the assessment method early. The apprentice must be confident they have demonstrated competence against the assessment requirements for the assessment method. The independent assessor or EPAO must ensure the apprentice is fully aware of all assessment requirements. The independent assessor or EPAO cannot suggest or choose to end the assessment methods early, unless in an emergency. The EPAO is

responsible for ensuring the apprentice understands the implications of ending an assessment early if they choose to do so. The independent assessor may suggest the assessment continues. The independent assessor must document the apprentice's request to end the assessment early.

KSBs observed, and answers to questions, must be documented by the independent assessor, using EPAO documentation.

Evidence from the observation and questioning must be assessed holistically using the grading criteria for this assessment method. The independent assessor must make all grading decisions.

EPAOs must ensure that apprentices have a different observation specification and example questions in the case of re-sits/re-takes.

Venue

The observation can take place in any of the following:

- workplace

Typically, the observation will take place in the apprentice's normal place of work using equipment and materials that they are familiar with.

The observation location must have access to specialist production and ancillary equipment which the apprentice is familiar with. The location must have appropriate facilities for secure assessment (for example free from distraction, outside influences and ensuring there is no opportunity for cheating).

Questioning must be conducted under controlled conditions i.e. quiet space, free of distractions and influence.

Support material

As a minimum, EPAOs must produce the following material to support this assessment method:

- guidance for apprentices and employers
- observation specifications including sample questions. The observation specification bank including sample questions must be of sufficient size to prevent predictability and reviewed regularly (and at least once a year) to ensure that it, and its content, are fit for purpose. The specifications, including questions relating to underpinning KSBs must be varied, yet allow assessment of the relevant KSBs. Independent assessors must use the question bank as a source for questioning but must use their professional judgement to tailor those questions appropriately and are responsible for generating appropriate follow-up questions in-line with the assessors' training and the EPAO's standardisation process.
- assessment recording documentation
- sample question bank

Assessment method 2: Professional discussion (supported by a portfolio of evidence)

Overview

The rationale for this assessment method is:

- it allows the apprentice to be assessed against KSBs which may not naturally occur during the observation, may take too long to observe or do not lend themselves to an observation. For instance, it provides an opportunity to discuss how an apprentice would carry out remedial action and preventative maintenance that might occur in a real work scenario.
- it enables the KSB's to be assessed holistically and objectively
- it is supported by a portfolio of evidence, enabling the apprentice to demonstrate the application of skill and behaviours as well as knowledge.
- it can be conducted remotely, potentially reducing cost

Delivery

This assessment will take the form of a professional discussion, which must be appropriately structured to draw out the best of the apprentice's competence.

Apprentices must be assessed against the KSBs assigned to this assessment method as shown in the mapping of KSBs. The professional discussion will be in the format of question and answer. Apprentices are expected to understand and use relevant occupational language.

The independent assessor will conduct and assess the professional discussion on a one-to-one basis.

The independent assessor must ask a minimum of 15 open competence-based questions (covering the themes below) that adequately cover the KSBs and grading descriptors. They may ask follow-up questions where clarification is required.

The professional discussion must last for 60 minutes. The independent assessor has the discretion to increase the time of the professional discussion by up to 10% to allow the apprentice to complete their last answer. Further time may be granted for apprentices with appropriate needs, in-line with the EPAO's reasonable adjustments policy.

During this method, the independent assessor must combine questions from the EPAO's question bank and those generated by themselves.

The independent assessor must review the portfolio of evidence before the professional discussion in order to tailor/develop questions relevant to the evidence it contains. The apprentice can use the portfolio of evidence as an aide memoire and to support answers being given.

Questions must cover the following areas:

- health, safety & welfare arrangements (K1)
- textile preparation (K2, K3, K8, B1, B4)
- textile production (S2, S4, S10, S11)
- quality assurance and quality control (K4, B3)

- personnel, client & self-management (S6, B2)
- WEAVING OPTION ONLY: weaving production (K5, K6, K7)
- FINISHING OPTION ONLY: finishing production (K9, K11)

Video conferencing can be used to conduct the professional discussion, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion.

The independent assessor will make all grading decisions. Evidence from the questioning must be assessed holistically using the grading criteria for this assessment method.

The apprentice may choose to end the assessment method early. The apprentice must be confident they have demonstrated competence against the assessment requirements for the assessment method. The independent assessor or EPAO must ensure the apprentice is fully aware of all assessment requirements. The independent assessor or EPAO cannot suggest or choose to end the assessment methods early, unless in an emergency. The EPAO is responsible for ensuring the apprentice understands the implications of ending an assessment early if they choose to do so. The independent assessor may suggest the assessment continues. The independent assessor must document the apprentice's request to end the assessment early.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits or re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of professional discussion and reaching consistent judgement.

The independent assessor must record the apprentice's answers to questions, the KSB's demonstrated in answers to questions and the grade achieved.

Venue

The professional discussion can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO (for example a training provider's premises)

The professional discussion should take place in a quiet room, free from distractions and influence.

Support material

EPAOs will produce the following material to support this assessment method:

- Question bank. The 'question bank' must be of sufficient size to prevent predictability and the EPAO must reviewed regularly (at least once a year) to ensure that it, and its content, are fit for purpose. The questions relating to underpinning KSBs must be varied yet allow assessment of the relevant KSBs. Independent assessors must use the question bank as a source for questioning but must use their professional judgement to

tailor those questions appropriately and are responsible for generating appropriate follow-up questions in-line with the assessors' training and the EPAO's standardisation process. It is recommended that questions are developed in consultation with employers of this occupation. EPAOs must maintain the security and confidentiality of their questions when consulting employers.

- Guidance for apprentices and employers

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments for this apprenticeship standard. This should include how an apprentice qualifies for reasonable adjustment and what reasonable adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this assessment plan.

Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA grade.

Grading

Assessment method 1: Workplace Observation and questioning

Numbers in brackets reference the KSBs in the occupational standard

Assessment area/KSBs	Pass Apprentice demonstrates all the following:	Distinction In addition, building on the pass criteria, apprentice demonstrates all the following:
Health, Safety & Welfare	Works in a safe manner, following procedures and does not compromise the safety of self or others.	

<p>Arrangements (K1, K12, S1, B5)</p>	<p>Wears appropriate PPE for machinery operations for example, footwear, overalls, hearing protection.</p> <p>Uses safe lifting and manual handling techniques using textile equipment appropriate to the task and correctly, for example, carts, bobbins, beams.</p> <p>Shows and explains the correct procedure for when machinery is stopped and locked down during periods of maintenance scheduling.</p> <p>Manages safety requirements of the business and the team, ensuring that overall control of health, safety and welfare is maintained, including the undertaking of routine assessments of dynamic risk and safe systems of work.</p> <p>Arranges the safe disposal of chemical requirements to environmental and organisation standards.</p>	
<p>Textile Production (S3)</p>	<p>Configures machinery to meet minimum specification requirements in the production of textiles in accordance with their company's standard operating procedures, within set organisational timescale/tolerance requirements.</p>	

<p>Data and Analysis (S5, S8)</p>	<p>Records manufacturing performance using company's Standard Operating Procedures. Uses bespoke ICT systems and control panels on machinery to correctly programme to produce fabrics to specification.</p> <p>Inputs and implements operational plans within their own work area with internal colleagues, while overseeing core duties that stem from technical report writing to formulating business strategy.</p> <p>Analyses data to inform production and ensure outputs achieve organisational specifications</p>	
<p>(WEAVING OPTION ONLY) Weaving (S7, S9)</p>	<p>Prepares and modifies weaving machines to ensure optimised settings for quality, output speed, minimal waste and safest operation. For example, modifying different insertion systems, yarn breakages, tensile strength, weight and volume</p> <p>Reviews accuracy of the work specification, job tickets. Raises any issues in an appropriate manner with appropriate individuals, for example, Production Manager, where applicable <u>or</u> explains correct process that they would follow where this does not occur naturally.</p> <p>Programmes textile machinery on behalf of team in line with employer's or manufacturer's guidance.</p>	<p>Manages and directly controls weaving production of self and team, without the need to re-do work, with no or minimal waste and no quality errors.</p> <p>Provides examples of pre-emptive maintenance and explains how they improve efficient production, for example, fibre and yarn evenness from carding or warping processes.</p> <p>Identifies and compares the advantages and disadvantages of different machines, as identified by the independent assessor, for example, rapier systems, air jet systems, ensuring that conditions of weaving are optimised.</p>

<p>(FINISHING OPTION ONLY)</p> <p>Finishing Production</p> <p>(K10, S12, S13, S14, S15)</p>	<p>Runs finishing machine at optimised settings for quality, output speed, minimal waste and safest operation.</p> <p>Identifies the correct finishing process ensuring fabric meets minimum specification requirements, for example, shrinkage, shearing, cropping.</p> <p>Prepares and modifies finishing machines to achieve specific fabric finishes to organisational standards, for example, water PH levels, temperature fluctuation and bleaching.</p> <p>Produces finished fabric in accordance with specification ensuring set timescale/tolerance requirements, for example, colour matching and absorption control.</p> <p>Monitors raw materials, for example, chemicals and softeners, to meet customer and organisational specifications</p>	<p>Manages and directly controls finishing production of self and team, without the need to re-do work, with no or minimal waste and no quality errors.</p> <p>Identifies weakness within the finishing process and pre-finishing operations, for example, product quality, minimising waste, and suggest feasible, cost effective improvements or explains appropriate response to issue presented by the independent assessor where this does not naturally occur.</p> <p>Provides examples of pre-emptive maintenance and explains how they improve efficient production, for example, water flow and temperature, steam systems and chemical processes.</p>
	<p>Cleans down, manages and maintains finishing equipment to ensure optimisation of production.</p> <p>Recognises poor quality work that has been passed by others through the production process and informs relevant superiors where applicable (for example, woven/nonwoven fabric requirements) or explains correct process that they would follow where this does not occur naturally.</p>	<p>Identifies and compares the advantages and disadvantages of different processes within finishing that affect the quality of the fabric, for example, mercerising, decatizing, shearing, raising, cropping, calendaring, stentering.</p> <p>Justifies the techniques used for textile finishing and how it affects production, for example, movement methods, temperature control, water softness.</p>
<p>Fail Criteria – An apprentice will fail if they do not meet all of the pass criteria</p>		

Assessment method 2: Professional Discussion (supported by a portfolio of evidence)

Assessment area/KSBs	Pass Apprentice demonstrates all the following:	Distinction In addition, building on the pass criteria, apprentice demonstrates all the following:
Health, Safety & Welfare Arrangements (K1)	Explains with examples, how Health, Safety and Environmental considerations for technicians including Control of Substances Hazardous to Health (COSHH), the Health & Safety at Work Act (HASAWA) and the Registration, Evaluation, Authorisation and restriction of Chemicals (REACH) impact on their work.	N/A
Textile Preparation (K2, K3, K8, B1, B4)	Explains how the job specification system works in their textile manufacturing environment. Outlines the process in which jobs are created, issued, undertaken and completed in line with company and customer standards and expectations Explains the background to the textile sector and its supply chain and how that	Explains suitable risk mitigation measures for a risk within the textile industry and its supply chain for example, environmental sustainability, social responsibility, waste management Explains strategic purchasing, for example reduction in material or machinery cost.

	<p>impacts on the organisation's culture, values and processes.</p> <p>Explains the procurement requirements for the textile manufacturing sector, for example, material origin, lead times.</p> <p>Explains how they communicate effectively with all levels within the organisation including internal colleagues and external customers to meet business priorities, for example describing how they have given a clear briefing to internal colleagues ensuring message is accurate and clear, using correct industry terminology.</p> <p>Explains the benefits of a new textile technology or innovative change to the textile manufacturing process as identified by the independent assessor, for example, automation, artificial intelligence, co-bots, Industry 4.0.</p>	
<p>Textile Production (S2, S4, S10, S11)</p>	<p>Explains an effective communication technique that meets organisation requirements. For example, explaining technical information or using non-verbal communication in a noisy environment</p> <p>Identifies and addresses machine issues and replace machine parts as needed to organisation specifications</p> <p>Explains how to manage maintenance schedules to reduce downtime and maintain company records, for example, managing stock levels and re-ordering machine parts.</p>	N/A

<p>Quality Assurance and Quality Control (K4, B3)</p>	<p>Explains how quality is at the heart of the production operation and how the production process is managed, for example, explains the company procedures that affect quality of production such as ISO quality standards.</p> <p>Outlines how checks on quality meet customer requirements.</p> <p>Provides examples of how the frequency of sub-standard quality production is managed.</p> <p>Explains how they compare the completed product to the original job specification, to ensure accuracy, consistency and customer approval.</p> <p>Describes how they undertake first stage testing and analysis, including the results that determine the bulk production schedules</p> <p>Explains how they regularly check the quality of output to ensure that production meets customer and job specification.</p>	<p>Explains how the frequency of substandard quality is checked, analysed and evaluated to improve performance and how it impacts on the business KPIs.</p> <p>Describes the characteristics and performance of one material as identified by the independent assessor, for example, natural and man-made fabrics and their performance under conditions, suggesting possible remedies in fault rectification within the manufacture process and the importance in relation to product quality.</p> <p>Outlines how quality highlights the forensic analysis of textile testing techniques for example, through analysed documentation provided at team briefings and meetings.</p>
<p>Personnel, Client & Self Management (S6, B2)</p>	<p>Explains how self-directed performance impacts on the business including quality and operational targets.</p> <p>Explains how they have provided information to colleagues as required, in a way that can be understood for example, appropriate communication methods</p> <p>Explains how they have adapted to changing production priorities to meet customer and organisation requirements.</p>	<p>Explains the different occasions where team working or individual working can support the overall business operation, identifying roles, responsibilities of self and the team in meeting client needs, for example, dealing with fault, poor service, changing parameters, disruption and errors.</p> <p>Explains communication techniques that can maximise business capability within the expectations of the business operation to improve performance through clear lines of communication.</p>

<p>(WEAVING OPTION ONLY)</p> <p>Weaving Production</p> <p>(K5, K6, K7)</p>	<p>Explains how a weaving machine works for example, components, power requirements, settings, raw material usage and safe operation.</p> <p>Explains how job specifications are created and how they link to the production schedule, for example, job ticket generation to woven product despatch.</p> <p>Explains the arrangements for machinery maintenance and how these processes are documented and form part of the operational improvement plan.</p>	<p>Explains the elements of methodical and process driven methods of working to ensure efficient productivity.</p> <p>Describes a process or workflow change to enhance effective and efficient weaving.</p>
<p>(FINISHING OPTION ONLY)</p> <p>Finishing Production</p> <p>(K9, K11)</p>	<p>Explains how a finishing machine works, for example, components, power requirements, settings, raw material usage and safe operation.</p> <p>Explains how job specifications are created and how they link to the production schedule, for example, job specification, treatment process, drying and despatch.</p> <p>Explains the arrangements for machinery maintenance and how these processes are documented and form part of the operational improvement plan.</p>	<p>Explains the elements of methodical and process driven methods of working to ensure efficient productivity.</p> <p>Describes a process or workflow change to enhance effective and efficient finishing.</p>
<p>Fail criteria – An apprentice will fail if they do not meet all of the pass criteria</p>		

Overall EPA grading

To achieve an EPA pass, apprentices must achieve a minimum of a pass in the workplace observation and the professional discussion. A fail in either assessment method will result in an EPA fail.

To achieve an EPA distinction, apprentices must achieve a distinction in both the observation and questioning and professional discussion (supported by portfolio of evidence).

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1 – observation with questioning	Assessment method 2 – professional discussion (supported by portfolio of evidence)	Overall grading
Fail	Any grade	Fail
Any grade	Fail	Fail
Pass	Pass	Pass
Distinction	Pass	Pass
Pass	Distinction	Pass
Distinction	Distinction	Distinction

Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit or re-take any failed assessment methods only.

Any assessment method re-sit or re-take must be taken within three-months of the fail notification, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to distinction.

Where any assessment method is re-sat or re-taken, there is no restriction on grading.

Roles and responsibilities

Role	Responsibility
Apprentice	<ul style="list-style-type: none"> • complete the on-programme element of the apprenticeship • prepare for and complete the EPA • complete the required amount of off-the-job training specified by the apprenticeship funding rules and as arranged by the employer and training provider
Employer	<ul style="list-style-type: none"> • support the apprentice to achieve the KSBs outlined in the occupational standard to their best ability • determines when the apprentice is working at or above the level outlined in the occupational standard and is ready for EPA • select the EPAO • confirm all EPA gateway requirements have been met • confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner • ensure apprentice is well prepared for the EPA • should not be involved in the delivery of the EPA • select the training provider • arrange and support off-the-job training to be undertaken by the apprentice • work with the training provider to select the EPAO

EPAO	<p>As a minimum EPAOs should:</p> <ul style="list-style-type: none"> • understand the occupational role • appoint independent assessors to assess the EPA • provide training and CPD to the independent assessors they employ to undertake the EPA • provide adequate information, advice and guidance documentation to enable apprentices, employers and providers to prepare for the EPA • deliver the end-point assessment outlined in this EPA plan in a timely manner • prepare and provide all required material and resources required for delivery of the EPA in-line with best practices • use appropriate assessment recording documentation to ensure a clear and auditable mechanism for providing assessment decision feedback to the apprentice • have no direct connection with the apprentice, their employer or training provider i.e. there must be no conflict of interest • maintain robust internal quality assurance (IQA) procedures and processes, and conducts these on a regular basis • conform to the requirements of the nominated external quality assurance body • organise standardisation events and activities in accordance with this plan's IQA section
	<ul style="list-style-type: none"> • organise and conduct moderation of independent assessors' marking in accordance with this plan • have, and operate, an appeals process • arrange for certification with the relevant training provider

Independent assessor	<p>As a minimum an independent assessor should:</p> <ul style="list-style-type: none"> • understand the standard and assessment plan • deliver the end-point assessment in-line with the EPA plan • comply to the IQA requirements of the EPAO • be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest • satisfy the criteria outlined in this EPA plan • hold or be working towards an independent assessor qualification e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading • have the capability to assess the apprentice at this level • attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section) • make final grading decisions in line with this EPA plan • record and report assessment outcome decisions
Training provider	<p>As a minimum the training provider should:</p> <ul style="list-style-type: none"> • work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the occupational standard and monitor their progress during the on-programme period • advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway • Plays no part in the EPA itself • deliver training to the apprentice as outlined in their apprenticeship agreement • work with the employer to select the EPAO • ensure that all supporting evidence required at the gateway is submitted in line with this EPA plan

Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPA organisations must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must:

- appoint independent assessors who have knowledge and competence in textile manufacturing operations, specifically with knowledge of the production requirements in industry that cover weaving and/or finishing.
- appoint independent assessors who have recent relevant experience of the occupation/sector at least the same level as the apprentice gained in the last three year's or significant experience of the occupation/sector
- appoint independent assessors who are competent to deliver the end-point assessment
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time
- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time
- ensure independent assessors attend standardisation events on an ongoing basis and at least once per year

Affordability

Affordability of the EPA could be aided by using at least some of the following practice:

- using an employer's premises, equipment and resources for observation and questioning
- apprentices should be contributing to workplace operations during the observation and questioning
- using technology to conduct the professional discussion remotely

Professional body recognition

This apprenticeship is designed to prepare successful apprentices to meet the requirements for registration for The Textile Institute - Licentiateship Member.

Mapping of knowledge, skills and behaviours (KSBs)

Assessment method 1: Workplace Observation and Questioning

KSBs marked CORE apply to all apprentices

KSBs marked FINISHING OPTION ONLY applies to those apprentices following the finishing option

KSBs marked WEAVING OPTION ONLY applies to those apprentices following the weaving option

Knowledge

<p>K1 Principles of health, safety and welfare including employment law, safety management systems, control of substances, first aid, safe systems of work, dynamic risk assessment, safe personal protective equipment usage and the adherence to safety management practices. (CORE)</p>
<p>K10 Finishing machinery and all services that affect and contribute to finishing of fabric types including woven, knitted, non-woven fabrics including machine limitations and design of construction. The machine finishing processes singeing, crabbing, scouring, carbonising, mercerising, bleaching, milling, hydro-extraction, drying, shearing, raising, pressing, cropping, decatizing, steaming, calendering, inspection, tentering and stentering as required within production facilities. (FINISHING OPTION ONLY)</p>
<p>K12 The use and disposal of chemicals/finishes for mildew proofing, mothproofing, crease resistance, moisture and soil resistance, flame retardants, microencapsulation, easy care, shrink resistance, and other functional coatings. (CORE)</p>
<p>Skills</p>
<p>S1 Work within, and contribute to, a safe, healthy and well managed environment, taking into consideration the appropriate health & safety legislation that affects textile manufacturing. (CORE)</p>
<p>S3 Configure and prove textile machinery to ensure fabric specification, input all mechanical and or electronic settings to maintain quality and productivity. Make changes to machine capabilities for different styles and or qualities. (CORE)</p>
<p>S5 Read and interpret data from production records, specifications, data management, process planning meetings including job documentation and appropriate work instructions. (CORE)</p>
<p>S7 Set up and configuration of weaving machinery to achieve specific parameters and understand all aspects of the weaving ticket/loom card, including warp plan, weft plan, weave plan, draft plan, yarn count. Contribute to achievement of desired production targets and quality standards. (WEAVING OPTION ONLY)</p>
<p>S8 Develop and operate plans for their own work area in line with business practice. Work with Shift Managers to produce specialist, technical reports and data to reinforce results and decision making. Identify priorities that affect the running of production whilst ensuring organisational policies are met. (CORE)</p>
<p>S9 Manage fault and diagnosis of fabric and loom faults including, short picks, stitching, weft and warp bars, machine lifting, temple marks and cuts. Use weaving techniques to minimise faults. Recognise when fibres, yarns and fabrics used in the pre-weaving operations affect the quality of the woven product. (WEAVING OPTION ONLY)</p>
<p>S12 Set up and configure all types of finishing machinery in the workplace to achieve specific fabric finishes, utilising skill and knowledge of treatment methods to ascertain the best finish. Contribute to achievement of production targets and quality standards in line with business practice. (FINISHING OPTION ONLY)</p>

S13 Identify when finishing treatments need refining by touch, feel, fabric rigidity and data analysis. Know how to diagnose faults in machinery and in process, for example, water softening, temperatures. Undertake appropriate remedial activity to fix and redeploy personnel where necessary. **(FINISHING OPTION ONLY)**

S14 Manage and maintain finishing equipment in line with company policy. Recognise when maintenance is affecting the fabric outcomes and technical performance. **(FINISHING OPTION ONLY)**

S15 Manage raw materials (fabric) to ensure PH, water and chemical levels are exact and fit for customer requirement. Manage the input and output of fabrics to ensure services are maintained and monitored including environmental impact assessments. **(FINISHING OPTION ONLY)**

Behaviours

B5 Complies with statutory and organisation health & safety regulations and policies at all times. Accepts responsibility for their workload with a responsible approach to risk. Continually demonstrates a high level of motivation and resilience when facing challenges. **(CORE)**

Assessment method 2: Professional Discussion (supported by a portfolio of evidence)

All KSBs marked CORE apply to all apprentices

KSBs marked FINISHING OPTION ONLY applies to those apprentices following the finishing option

KSBs marked WEAVING OPTION ONLY applies to those apprentices following the weaving option

Knowledge

K1 Principles of health, safety and welfare including employment law, safety management systems, control of substances, first aid, safe systems of work, dynamic risk assessment, safe personal protective equipment usage and the adherence to safety management practices. **(CORE)**

K2 The textile sector, its history, heritage, manufacturing process and innovation potential in detail. Know how goods are procured and how they affect the economic potential in UK manufacturing. Understanding the sector will involve research in past, present and future manufacturing processes, including how new technology will affect production. **(CORE)**

K3 The sources and processes of the textile supply chain, from raw materials consisting of natural fibres and manufactured fibres, their origin and their manufacturing process. Understanding pre and postproduction operations from fibre to finished garment. Knowing

customer standards and expectations and adapting in-company processes to meet client need. **(CORE)**

<p>K4 The quality management systems deployed in textile processing at the high level. learners will require advanced knowledge and understanding of analytical product assessment and how it affects quality. The differences between quality testing methodology, upholding ISO systems, textile specific measurements and industry standards. Read and interpret specifications and test results and implement changes to machinery/processes as required. Understanding which aspects of quality production can affect final creations. (CORE)</p>
<p>K5 The primary and secondary motions of weaving including techniques used for manufacturing such as shedding (Jacquard, Dobby and Tappet), picking (shuttle, projectile, rapier, air and water jet systems), beat up (crank and cam motions), take up (gear driven and electronic systems), let off (positive and negative systems) in line with production requirements. (WEAVING OPTION ONLY)</p>
<p>K6 Weaving machinery and all components that contribute to an effective production system, including machinery limitations, asymmetrical/symmetrical shed geometry, width setup, machine specification, ancillary services of the weaving machine, breakdown procedures, maintenance schedules, fault analysis and rectification routines, parts replacement. (WEAVING OPTION ONLY)</p>
<p>K7 The conditions in which weaving machinery operates, the temperatures and climatic conditions that affect yarn and fibre manufacturing, cleaning and cross contamination practice, environmental impact of textile manufacturing, waste reduction, recycling. (WEAVING OPTION ONLY)</p>
<p>K8 Sources of fibre production, properties of different fibres and identification methods, how manufactured fibres are produced, and methods used, use of blends in textile manufacturing processes, production methods of raw materials and varied processes fibre to yarn to fabric, specialist materials and properties used in technical textile manufacturing. (CORE)</p>
<p>K9 The different finishing processes including wet, dry, mechanical and chemical procedures. How finishing techniques can vary but are largely dependent on fibre type and yarn/fabric structure, fibre physical properties, fibre absorption properties and fabric receptivity to finishing agents, and susceptibility to chemical modifications. (FINISHING OPTION ONLY)</p>
<p>K11 The conditions in which finishing machinery operates, the temperatures and climatic conditions that affect fabric finishing, cleaning and cross contamination practice, environmental impact of textile finishing, waste reduction, recycling. (FINISHING OPTION ONLY)</p>
<p>Skills</p>
<p>S2 Develop working relationships in a manufacturing environment including listening skills around the machinery, effective communication skills with colleagues, identify improvements and interact confidently to ensure that production is achieved. (CORE)</p>

<p>S4: Perform and make records of scheduled maintenance to ensure the efficiency of machinery meets production expectations and reduce malfunctions. Ensure continuing supply of spare parts to eliminate machine downtime and eliminate production losses, liaise with machine manufacturers to overcome performance limitations. (CORE)</p>
<p>S6 Accept changing priorities and work flexibly to meet company requirements. Work effectively with others in a team whilst maintaining effective working relationships. Accept that in textile production, the expectation to complete tasks within the job role affects the customer experience. (CORE)</p>
<p>S10 Rectify machine malfunctions and replace machine parts to tolerance settings. Maintain supply of spare parts to ensure production continuity. Carry out scheduled maintenance to machine manufacturer guidelines and lubricant specifications. Plan and forecast using known periods of peak time and downtime to maximise production with appropriate colleagues. (CORE)</p>
<p>S11 Utilise production scheduling timing and accuracy to ensure changeover of jobs, staff and machinery are managed and maintained efficiently and effectively, recognising how to forecast and plan. (CORE)</p>
<p>Behaviours</p>
<p>B1 Ensure efficient and effective use of time, especially at shift changeover and during textile machinery downtime or changeovers. Manage time to meet business priorities. (CORE)</p>
<p>B2 Recognise the value of the role within the organisation and the value of the role others perform, the drive and ambition needed to achieve in all aspects of work, including the importance of self-organisation and self-management of time. (CORE)</p>
<p>B3 Commit to maintaining the highest standards of precision and excellence as appropriate to mechanised textile production, a positive work ethic in line with the organisation's core strategies and principles. (CORE)</p>
<p>B4 Appropriate communication techniques within a manufacturing environment, including patience, calmness, vigilance and appropriate communication styles when dealing with all types of customer. (CORE)</p>