

# INSPECTION REPORT

## **TTE Management & Technical Training**

**20 February 2004**



ADULT LEARNING  
INSPECTORATE

## Grading

Inspectors use a seven-point scale to summarise their judgements about the quality of learning sessions. The descriptors for the seven grades are:

- *grade 1 - excellent*
- *grade 2 - very good*
- *grade 3 - good*
- *grade 4 - satisfactory*
- *grade 5 - unsatisfactory*
- *grade 6 - poor*
- *grade 7 - very poor.*

Inspectors use a five-point scale to summarise their judgements about the quality of provision in occupational/curriculum areas and Jobcentre Plus programmes. The same scale is used to describe the quality of leadership and management, which includes quality assurance and equality of opportunity. The descriptors for the five grades are:

- *grade 1 - outstanding*
- *grade 2 - good*
- *grade 3 - satisfactory*
- *grade 4 - unsatisfactory*
- *grade 5 - very weak.*

The two grading scales relate to each other as follows:

SEVEN-POINT SCALE	FIVE-POINT SCALE
grade 1	grade 1
grade 2	
grade 3	grade 2
grade 4	grade 3
grade 5	grade 4
grade 6	grade 5
grade 7	

## Adult Learning Inspectorate

The Adult Learning Inspectorate (ALI) was established under the provisions of the *Learning and Skills Act 2000* to bring the inspection of all aspects of adult learning and work-based learning within the remit of a single inspectorate. The ALI is responsible for inspecting a wide range of government-funded learning, including:

- work-based learning for all people over 16
- provision in further education colleges for people aged 19 and over
- **learnirect** provision
- Adult and Community Learning
- training funded by Jobcentre Plus
- education and training in prisons, at the invitation of Her Majesty's Chief Inspector of Prisons.

Inspections are carried out in accordance with the *Common Inspection Framework* by teams of full-time inspectors and part-time associate inspectors who have knowledge of, and experience in, the work which they inspect. All providers are invited to nominate a senior member of their staff to participate in the inspection as a team member.

## Overall judgement

Where the overall judgement is that the provision is adequate, only those aspects of the provision which are less than satisfactory will be reinspected.

Provision will normally be deemed to be inadequate where:

- more than one third of published grades for occupational/curriculum areas, **or**
- leadership and management are judged to be less than satisfactory.

This provision will be subject to a full reinspection.

The final decision as to whether the provision is inadequate rests with the Chief Inspector of Adult Learning. A statement as to whether the provision is adequate or not is included in the summary section of the inspection report.

# **INSPECTION REPORT**

## **TTE Management & Technical Training**

### **Contents**

#### **Summary**

Description of the provider	1
Scope of provision	1
About the inspection	2
Overall judgement	2
Grades	2
Key findings	3
What learners like about TTE Management & Technical Training	8
What learners think TTE Management & Technical Training could improve	8
Key challenges for TTE Management & Technical Training	9

#### **Detailed inspection findings**

Leadership and management	10
Equality of opportunity	12
Quality assurance	13
Engineering, technology & manufacturing	15

## INSPECTION REPORT

### DESCRIPTION OF THE PROVIDER

1. TTE Management & Technical Training (TTE) is an independent training company limited by guarantee with charitable status. TTE was originally set up in 1990 as a training joint venture between two large manufacturing companies and became independent in 1999. It provides advanced modern apprenticeships in mechanical, electrical, chemical and fabrication engineering, funded by the Learning and Skills Council (LSC). TTE works in partnership with the local college of further education to provide a student engineering training programme for learners aged 16 to 18, and together were awarded Centre of Vocational Excellence (CoVE) status in 2003. Training takes place in TTE's main training centre in Middlesbrough, in a second training centre at a manufacturing site in Middlesbrough, situated inside one of the local petrochemical complexes, and in learners' workplaces.
2. TTE's training business consists of a parent company and three separate subsidiary companies. The parent company provides training in engineering for pupils aged 14 to 16 funded through the local education authority and the Neighbourhood Renewal Fund, a student apprenticeship programme delivered as part of a franchise agreement with a local college, and modern apprenticeship programmes. The subsidiaries, TTE Scotland Ltd, TTE Consulting Ltd and TTE International Ltd, provide commercial training for UK and international organisations. Only the LSC-funded training was within the scope of this inspection.
3. The company is managed by the group managing director and a senior management team consisting of the group managing director, group business and operations directors and group technical and finance managers. The managing director reports to a company board of six non-executive directors drawn from the process engineering industry and commerce. TTE employs 164 staff of whom 40 are directly involved in the government-funded training provision. Of these, 23 are employed full time and 17 are temporary or part time.
4. In January 2004, the unemployment rate in Middlesbrough was 5.5 per cent, compared with 2.5 per cent nationally. According to the 2001 census, 6.3 per cent of Middlesbrough's population is from minority ethnic groups, compared with 9.1 per cent nationally.

### SCOPE OF PROVISION

#### Engineering, technology & manufacturing

5. One hundred and sixty-six learners are following engineering advanced modern apprenticeships. Of these, 56 are working towards the chemical advanced modern apprenticeship, 66 towards the engineering advanced modern apprenticeship, 41 towards the mechanical advanced modern apprenticeship, and three towards the fabrication and welding advanced modern apprenticeship. All learners work towards a level 3 national

## TTE MANAGEMENT & TECHNICAL TRAINING

vocational qualification (NVQ) appropriate to their apprenticeship framework and their chosen career path. Learners are recruited onto the training programmes either directly, or after completing a two-year introductory full-time student engineering programme. This introductory programme is provided by the local college of further education at, and in partnership with, TTE. During this programme, learners achieve some of the mandatory components of the advanced modern apprenticeship.

6. All advanced modern apprentices are sponsored by local companies which range from small employers to large multinational chemical processing and engineering companies. Day-release off-the-job training is provided at TTE's training centres by college tutors. Learners on the young scientist pathway of the chemical engineering advanced modern apprenticeship programme complete 40 per cent of a science degree, with the opportunity to complete the remaining work over the next three years if they are successful in gaining employment with their sponsoring company. Assessment visits are made every two to four weeks.

## ABOUT THE INSPECTION

Number of inspectors	5
Number of inspection days	20
Number of learner interviews	52
Number of staff interviews	35
Number of employer interviews	18
Number of subcontractor interviews	2
Number of locations/sites/learning centres visited	23

## OVERALL JUDGEMENT

7. The quality of the provision is adequate to meet the reasonable needs of those receiving it. More specifically, TTE's leadership and management are good, and its approach to equality of opportunity and arrangements for quality assurance are satisfactory. The quality of work-based learning in engineering is good.

## GRADES

*grade 1= outstanding, grade 2 = good, grade 3 = satisfactory, grade 4 = unsatisfactory, grade 5 = very weak*

<b>Leadership and management</b>	<b>2</b>
Contributory grades:	
Equality of opportunity	3
Quality assurance	3

Engineering, technology & manufacturing	2
Contributory grades:	
Work-based learning for young people	2

## KEY FINDINGS

### Achievement and standards

8. **The retention and achievement rates on the advanced modern apprenticeship are good.** Of those learners who started in 2000-01, 92 per cent have been retained and 83 per cent have completed their modern apprenticeship. Of the 52 learners who started in 2001-02, 50 per cent were retained and 50 per cent are still in learning. However, 35 per cent of the learners have left without completing the full apprenticeship framework. Progression into employment from the advanced modern apprenticeship is very good.

9. The standard of learners' practical skills is good. Great emphasis is placed on health and safety while learners carry out practical work. The standard of work in learners' portfolios varies, but is satisfactory overall. Some learners produce comprehensive reports detailing tasks they have carried out and take great care in the presentation of their work. However, some portfolios are poorly presented and not detailed enough.

### Quality of education and training

10. TTE's staff have a good range of engineering expertise and good and established associations with employers. **Work placements are good quality.** Many of the employers are large international companies, with a strong commitment to training, providing learners with good training opportunities. Learners carry out an extensive range of activities and make good progress in developing their practical skills.

11. **The off-the-job training resources for chemical engineering learners are outstanding.** TTE owns two fully-operational pilot chemical processing plants on Teesside, used solely for the training and assessment of learners. The plants are built to current industry standards. Working conditions and practices match those in industry. The plants have an extensive range of electrical and mechanical components, which are effectively used to demonstrate systems and equipment for the benefit of learners on electrical and mechanical engineering programmes.

12. **Learners receive good vocational support from experienced and well-qualified training staff.** Most of the tutors and the assessment team have been recruited from within the industry and have an extensive knowledge and understanding of the local industrial placements. Support for learners while on industrial placement is good. Assessors visit learners fortnightly to monitor their progress and review their assessment plans.

13. **Mechanical engineering learners have the opportunity to achieve a good range of additional engineering-related qualifications.** The achievement of such qualifications raises the esteem and confidence of learners. **TTE offers advanced modern apprenticeship training programmes which are appropriate to a very wide range of engineering disciplines.**

14. The arrangements for initial and on-course assessment are satisfactory. The support for the development of learners' literacy and numeracy skills at TTE's training centre is also satisfactory. However, literacy and numeracy support from appropriately qualified staff is not provided in the workplace. Many learners with good general certificate of secondary education (GCSE) qualifications spend time unnecessarily preparing for, and taking, external key skills exams.

15. The standard of training is satisfactory. Of the two learning sessions observed, one was satisfactory and one was good. Training notes are clear, appropriate and structured well. Learners receive a good balance of background knowledge and practical training. However, the background knowledge sessions are too long and some classrooms are bland and uninspiring.

16. **Progress reviews for chemical and electrical engineering learners are weak.** Not enough reference is made to the results of initial assessment and the learners' attainment to date, and the individual learning plan is not updated. Assessors do not make reference to previous reviews and not enough measurable targets are set for learners. Reviews do not provide a satisfactory feedback process for learners or employers.

17. **On-the-job training plans for electrical and mechanical engineering learners are not structured enough.** Learners gain experience from a range of locations in their companies and tasks are appropriately cross-referenced to the NVQ. However, the planning of learners' activities is not structured enough and they do not make the best use of their workplace experience as evidence for their NVQ. Learners' workloads are also often unbalanced.

### **Leadership and management**

18. **TTE's strategic management is good.** The company has successfully grown the scale and breadth of its training provision. It has been particularly successful in developing a strong awareness of engineering training and careers with local schools, and in meeting the training needs of the local, national and international engineering industry. Recruitment of learners has increased in all divisions of the business. TTE has worked closely with the local college of further education to establish a CoVE for engineering and process, enabling the two organisations to provide a coherent centralised resource for their learners. The non-executive board of directors provides strong governance for TTE and appropriately challenges all proposed business developments. However, the board does not sufficiently monitor the quality of the training learners receive from both TTE's and the subcontractor's staff.



19. **TTE has a very effective internal communication system.** Regular formal staff meetings are supplemented by daily morning meetings which ensure good day-to-day operational management. Assessors visit learners in their workplace every two weeks to assess work and provide support. Employers also appreciate this regular contact and feel well informed about their role in the training programme and the progress of their learners.

20. **TTE provides good development opportunities for its staff.** It uses a clear and well-established appraisal process to identify appropriate training to meet the individual needs of staff and the strategic priorities of the company. Staff members study for a wide range of additional qualifications. Where appropriate, development plans are carefully planned to enable staff to progress within the company and mentors are used well to ensure the smooth transfer of responsibilities.

21. **TTE has extensive links with external organisations,** a strength it identifies in its self-assessment report. Members of the senior management team chair significant groups in the region. These links enable TTE to keep up to date with industry and training developments and to share good practice with other training providers.

22. **TTE's team of school liaison staff effectively promotes and develops engineering studies in schools.** Its work includes running projects with primary schoolchildren and providing careers advice in 50 of the secondary schools in the district. TTE also now provides a good-quality, well-resourced learning environment for around 300 pupils who are working towards a GCSE in engineering at the main training centre.

23. **TTE's management of the subcontracted training provision is weak.** While most of the subcontracted training provision has recently been relocated to TTE's training centre, not enough effective communication takes place between the two partner organisations. Staffing to manage the area and provide the training is not consistent. Learners complain of tutors being late or missing classes and of the poor communication between staff. Some learners do not attend the scheduled late afternoon classes. TTE and the sponsoring employers were not aware, until recently, of the increasing attendance problems of some learners.

24. **TTE promotes engineering careers and learning opportunities well to young female pupils and schoolchildren.** TTE has set itself demanding targets for the recruitment of female learners, and for the progression of female pupils from its activities with schools onto its young engineer programme. The proportion of female learners now on the directly sponsored chemical technician, laboratory technician and young scientist pathways of the chemical engineering advanced modern apprenticeship programmes is 17 per cent.

25. TTE has a good range of equal opportunities policies and procedures. Equal opportunities data are routinely collected and analysed for trends in the recruitment and achievement rates of learners from under-represented groups. Staff receive updates on equal opportunities developments and regularly attend in-house and external equal opportunities training events. Learners' introduction to, and awareness of, their rights

## TTE MANAGEMENT & TECHNICAL TRAINING

and responsibilities is satisfactory. Some assessors reinforce learners' awareness of the policies at the quarterly progress reviews, using a standardised list of questions. However, this practice is not consistent and some assessors do not carry it out.

**26. TTE's quality assurance procedures are established well and lead to continuous quality improvement,** a strength also identified in the self-assessment report. A senior manager has clear overall responsibility for the management of quality assurance, and a designated quality assurance co-ordinator has day-to-day operational control. Detailed reports on quality improvement issues are presented at the scheduled meetings of the quality review team. The self-assessment process is established well and all staff routinely contribute to the development of TTE's self-assessment report and development plan. The responsibilities and deadlines for the clear targets for improvement are appropriately identified. The latest self-assessment report, produced in January 2004, identifies most of the strengths and some of the weaknesses found by inspectors.

**27. TTE does not apply some quality assurance processes consistently.** It does not monitor learners' quarterly progress reviews enough to ensure consistent practice across all areas of the provision. Some progress reviews do not have sufficiently detailed targets, and targets agreed with individual learners at one review are not routinely monitored at the next. TTE has no process to ensure that learners' individual learning plans are used consistently across all programmes. For some learners, individual learning plans are not updated and on-the-job training plans are not adequate. The procedures for ensuring that employers receive copies of the learners' progress reviews and attendance records are not consistently applied, and many employers do not receive the relevant documents.

**28.** TTE's internal verification processes are satisfactory. Candidates are questioned well orally by internal verifiers before their portfolios are passed for accreditation. Assessors' teams hold daily operational meetings to consider matters relating to individual learners. However, internal verification processes are not sufficiently monitored and some practice between the sub-areas of learning is not consistent.

*The following strengths and weaknesses were identified during this inspection:*

### Leadership and management

#### Strengths

- good strategic management
- very effective internal communication
- good staff development
- effective partnerships with external organisations
- effective promotion of engineering studies to schools
- strong promotion of learning opportunities to increase participation by female learners
- well-established quality assurance procedures and continuous quality improvement

### **Weaknesses**

- weak management of subcontracted provision
- inconsistent application of some quality assurance processes

### **Engineering, technology & manufacturing**

#### **Strengths**

- good retention and achievement rates
- good-quality work placements
- outstanding off-the-job training resources for chemical engineering learners
- good vocational support for learners
- good range and achievement of additional qualifications in mechanical engineering
- wide range of advanced modern apprenticeship training programmes

#### **Weaknesses**

- weak progress reviews in chemical and electrical engineering
- insufficiently structured on-the-job training plans in mechanical and electrical engineering

## **WHAT LEARNERS LIKE ABOUT TTE MANAGEMENT & TECHNICAL TRAINING:**

- the good training and support from staff, both at work and at home - 'instructors are really knowledgeable and helpful, and they pass on their knowledge to us'
- the chance to gain recognised qualifications
- the credibility of an apprenticeship with a large company
- the wide range of skills and experience gained - 'there's always something to do and always something new to learn'
- the good opportunities for employment in the future
- the good support from staff in the sponsoring companies

## **WHAT LEARNERS THINK TTE MANAGEMENT & TECHNICAL TRAINING COULD IMPROVE:**

- the consistency of its approach to planning training assignments
- the integration of the college and work-based learning
- the organisation of off-the-job training at college
- the amount of literacy and numeracy skills support available when on work placement
- the number of opportunities to visit other learners in their workplace
- the amount of help from the college with key skills training and assessment
- the mock examinations to help prepare for external key skills tests
- the amount of information on progression and careers
- its response to learners' feedback – 'we complained about the absence of barrier creams for hand protection, and we're still waiting'
- the organisation on one site - 'the lecturers turn up late, and on one occasion, they lost our timesheets, and we were reprimanded for not submitting them'
- the amount of time allocated for some modules - 'there's insufficient tuition time for some modules of the technical certificate'

## **KEY CHALLENGES FOR TTE MANAGEMENT & TECHNICAL TRAINING:**

- further develop the quality assurance system and ensure its consistent use throughout the training provision
- provide structured on-the-job training plans for mechanical and electrical engineering learners
- improve the progress reviews for chemical and electrical engineering learners
- improve the management of subcontracted training provision
- improve the monitoring of equality of opportunity in the workplace

## DETAILED INSPECTION FINDINGS

### LEADERSHIP AND MANAGEMENT

Grade 2

*The following strengths and weaknesses were identified during this inspection:*

#### Strengths

- good strategic management
- very effective internal communication
- good staff development
- effective partnerships with external organisations
- effective promotion of engineering studies to schools
- strong promotion of learning opportunities to increase participation by female learners
- well-established quality assurance procedures and continuous quality improvement

#### Weaknesses

- weak management of subcontracted provision
- inconsistent application of some quality assurance processes

29. TTE has a good approach to the strategic management of the company. It has a comprehensive strategic plan which is distributed to all staff and clearly sets out its mission and objectives, and financial and educational targets. TTE was formed in 1990 and was financially underwritten by its founding companies until 1999. During that period, TTE successfully increased the scale and breadth of its training provision. It has been particularly successful in developing a strong awareness of engineering training and careers with local schools and meeting the training needs of the local, national and international engineering industry. Recruitment of learners has increased in all divisions of the business. The profits from the growth of TTE's commercial training provision are gift-aided to support the schools and apprenticeship training division of the company.

30. TTE has worked closely with the local college of further education for many years to jointly provide engineering training, and has now established a CoVE for engineering with it. The CoVE capital funding has enabled the two organisations to provide a coherent centralised resource for their learners.

31. The non-executive board of directors provides strong governance for TTE. The directors are supplied with clear and comprehensive reports on topics including TTE's financial performance, learner retention and achievement rates and health and safety statistics. All proposed business developments are appropriately challenged by the board. Minutes of meetings are detailed, and agreed actions are appropriately reviewed. However, the board does not sufficiently monitor the quality of the training learners receive from TTE's and the subcontractor's staff.

32. TTE has a very effective internal communication system. It supplements its regular

formal staff meetings with daily morning meetings which ensure good day-to-day operational management. Assessors visit learners in their workplace every two weeks to assess work and provide support. Employers also appreciate this regular contact, which keeps them well informed about their role in the training programme and the progress of their learners. TTE uses employer forums and learner forums to collect feedback on how to improve the training provision. Improvements it has made include moving to electronic communications with employers, changing the training programmes to enable learners to achieve their key skills qualifications before joining the advanced modern apprenticeship programme and developing an incentive scheme to reward learners for their achievements.

33. TTE provides good development opportunities for its staff. It uses a clear and well-established appraisal process to identify appropriate training to meet the individual needs of staff and the strategic priorities of the company. The appraisal process is structured well, completed thoroughly and refers appropriately to previous improvement targets and personal achievements. Staff study for a wide range of additional qualifications including teaching, assessor, verifier, counselling and safety qualifications, and a range of short courses including equal opportunities and information technology training is available. TTE's staff have also worked closely with the college's staff to develop their understanding and resources for the delivery of the key skills qualifications. Where appropriate, development plans are carefully formulated to enable staff to progress in the company and mentors are used well to ensure the smooth transfer of responsibilities.

34. TTE has extensive links with external organisations, a strength identified in its self-assessment report. Members of its senior management team chair significant groups in the area, such as a regional chemical industry training organisation, a local leadership advisory group and the local further education college corporation. They are also members of other groups, including the regional council of a national business confederation, the local partnership of learning providers and the local sub-regional strategic partnership. These links enable TTE to keep up to date with industry and training developments and to share good practice with other training providers. For example, TTE's current approach to delivering advanced modern apprenticeships, and its significant investment in two chemical production plants and a control-room simulator, were introduced after extensive consultation with industry employers. Its continued links with its founding companies provide TTE with a wide range of well-resourced, good-quality learning environments and work placements which it can carefully match with the NVQ and personal career aims of its learners. The work of staff on the development of a foundation degree with a local university, and on the development of technical certificates and NVQs, also ensures that TTE is kept up to date with developments in engineering training provision.

35. In 1994, TTE began working with two local schools to promote engineering careers to year 11 pupils. Since then, a team of school liaison staff has been dedicated to the promotion and development of engineering studies in schools. Its work includes running projects with primary schoolchildren and providing careers advice in 50 of the secondary schools in the district. TTE also now provides a good-quality, well-resourced learning environment for around 300 pupils who are working towards a GCSE in engineering at

its main training centre.

36. TTE's management of the subcontracted training provision is weak. While most the subcontracted training provision has recently been relocated to TTE's training centre, communication between the two partner organisations is not effective enough. Staffing to manage the area and provide the training is not consistent, with some staff being absent through ill health. Learners complain of tutors being late or missing classes, and of poor communication between staff. Some learning sessions are scheduled in the late afternoon, and some learners do not attend these sessions. TTE and the sponsoring employers were not aware, until recently, of the increasing attendance problems of some learners.

### **Equality of opportunity**

### **Contributory grade 3**

37. TTE promotes engineering careers and learning opportunities well to young female pupils and schoolchildren. TTE has particularly good links with local schools and has obtained additional funding and sponsorship to carry out this promotional work. It has a significant and regular involvement in schools' open events, subject options choice evenings and careers events, and works closely with Connexions. TTE has set itself demanding targets for the recruitment of female learners, and for the progression of female pupils from its activities with schools onto its young engineer programme. While the number of female applicants remains low, there is evidence that those joining training programmes are retained. The proportion of female learners now on the directly sponsored chemical technician, laboratory technician and young scientist advanced modern apprenticeship programmes is 17 per cent.

38. TTE has a good range of policies and procedures relating to equal opportunities, including policies on bullying, sexual harassment and parental leave. Clear responsibility for the development of policies lies with a senior manager. A satisfactory annual review of policies is managed by the equal opportunities co-ordinator. TTE makes effective use of an external consultant and a federation of engineering employers to obtain advice on the most recent legislative changes. All policies are easily accessible to staff on the company intranet, and staff receive appropriate notification of any updates.

39. Employers who provide work placements for TTE's learners are required to have a satisfactory equal opportunities policy, and their approach to equality of opportunity is monitored during a systematic ongoing review of the health, safety and welfare of learners on work placements. However, TTE has no formal system for routinely monitoring equality of opportunity in the workplace during assessors' regular visits to learners. Equal opportunities data are routinely collected and analysed for trends in the recruitment and achievement rates of learners from under-represented groups. Trends are regularly reported to the senior management quality review group.

40. TTE has a satisfactory system for the assessment of learners' additional literacy, numeracy and language support needs. It has recently introduced an effective computer-based assessment tool to assist with the identification of additional learning support needs. Learners receive satisfactory support for their additional learning needs from



external specialist staff while they are at TTE's premises. Although assessors provide informal additional support, not enough formal arrangements are in place to provide adequate additional specialist support for learners on work placement.

41. Staff receive updates on developments in equality of opportunity and regularly attend in-house and external equality of opportunity training events. In addition, nine members of staff have recently attended counselling training, and 13 members of staff attended a dyslexia awareness programme. A thorough disability-access audit was carried out in March 2003 by an external consultant, and it made clear recommendations for action to bring TTE in line with the requirements of the Disability Discrimination Act 1995. TTE has a comprehensive disability statement which gives clear guidance on learners' entitlement and the services available for them. Two members of staff recently attended a two-day workshop on the Disability Discrimination Act 1995 and subsequently presented a detailed report to senior managers. TTE has also recently sought to engage more staff in the active promotion of equality of opportunity and diversity by establishing an equality and diversity forum. It is too soon to judge the effectiveness of this new initiative.

42. Learners' introduction to, and awareness of, their rights and responsibilities is satisfactory. Some assessors reinforce learners' awareness of the policies at their quarterly progress reviews, using a standardised list of questions. However, this practice is not consistent and some assessors do not carry it out. The complaints procedure is adequate and those learners interviewed were aware of the actions they should take in the event of a grievance.

### **Quality assurance**

### **Contributory grade 3**

43. TTE's quality assurance procedures are well established and lead to continuous quality improvement, a strength identified in the self-assessment report. TTE is accredited to hold the ISO 9001:2000 standard, which is an internationally recognised system for quality assurance. It also holds the Investors in People award, which is a national standard for improving an organisation's performance through its people. TTE monitors its compliance with the ISO standards through a comprehensive systematic internal audit and annual external audit. All staff have been trained in internal auditing procedures.

44. A senior manager has clear overall responsibility for the management of quality assurance, and a designated quality assurance co-ordinator has day-to-day operational control. Detailed reports on quality improvement issues are presented at the scheduled meetings of the quality review team, a team which includes the managing director. TTE's standardised quality assurance documents are easily accessible on the company's intranet and are accompanied by a clear visual overview of the whole process.

45. The self-assessment process is well established at TTE, and all staff routinely contribute to the development of the self-assessment report and development plan. Responsibilities and deadlines for clear targets for improvement are appropriately identified. The latest self-assessment report, produced in January 2004, identified most of the strengths and some of the weaknesses found by inspectors.

## TTE MANAGEMENT & TECHNICAL TRAINING

46. TTE has a satisfactory system for observing and monitoring the quality of the training provision. Staff receive satisfactory developmental feedback after the observations. Areas for development which arise from these observations are discussed in staff members' annual appraisals and recorded in the individuals' and the company staff development plans.

47. TTE's application of some quality assurance processes is not consistently good. For example, it does not carry out enough monitoring of learners' quarterly progress reviews to ensure consistency across all areas of the provision. Some progress reviews do not have sufficiently detailed targets, and targets agreed with individual learners at one review are not routinely monitored at subsequent reviews. No process is in place to ensure that learners' individual learning plans are used consistently across all programmes. For some learners, individual learning plans are not updated and on-the-job training plans are not adequate. Procedures for ensuring that employers receive copies of the learners' progress reviews and attendance records are not consistently applied, and many employers do not receive the relevant documents. Not enough quality assurance processes are in place to monitor feedback regularly from learners and to identify possible weaknesses in the training programmes.

48. Internal verification processes are satisfactory. Candidates are questioned well orally by internal verifiers before portfolios are passed for accreditation. Assessors' teams hold daily operational meetings to consider issues relating to individual learners. Learners' achievements are systematically recorded on manual and computer-based visual display charts, and monthly reports on achievement rates are routinely submitted to an internal management group. However, insufficient monitoring of the internal verification processes takes place and practices between the sub-areas of learning are not consistent. For example, no clear internal verification sampling plan exists for chemical engineering programmes.

## AREAS OF LEARNING

### Engineering, technology & manufacturing

### Grade 2

Programmes inspected	Number of learners	Contributory grade
Work-based learning for young people	166	2

*The following strengths and weaknesses were identified during this inspection:*

#### Strengths

- good retention and achievement rates
- good-quality work placements
- outstanding off-the-job training resources for chemical engineering learners
- good vocational support for learners
- good range and achievement of additional qualifications in mechanical engineering
- wide range of advanced modern apprenticeship training programmes

#### Weaknesses

- weak progress reviews in chemical and electrical engineering
- insufficiently structured on-the-job training plans in mechanical and electrical engineering

#### Achievement and standards

49. The advanced modern apprenticeship at TTE is generally run as a two-year programme following on from a two-year student engineering programme delivered as part of a franchise agreement with a local college. The retention and achievement rates, as calculated from when learners join TTE for their third year of engineering training, are good. Of those learners who started in 2000-01, 92 per cent have been retained and 83 per cent have completed their modern apprenticeship. Of the 52 learners who started in 2001-02, 50 per cent have reached the end of their training programme and the other 50 per cent are still in learning. However, a third of learners from this intake have left without completing the full framework. Progression into employment from the advanced modern apprenticeship programme is very good. Of those learners who started in 2000-01, almost 90 per cent have obtained full-time engineering-related jobs.

50. The standard of learners' practical skills is good. Great emphasis is placed on health and safety while learners carry out practical work. Learners demonstrate a good understanding of health and safety procedures and this understanding is regularly checked by their workplace supervisors and assessors.

51. The standard of work in learners' portfolios varies, but is satisfactory overall. Some learners produce comprehensive reports detailing tasks they have carried out and take great care in the presentation of their work. For example, one learner produced a report

## TTE MANAGEMENT & TECHNICAL TRAINING

explaining how he had replaced the diaphragm in a pump. The report was produced well on a computer and diagrams explaining the pump's operation were incorporated into the report. Other learners supplemented their NVQ evidence with digital photographs of their work. Another learner gave a presentation to his group about his work as a lifeguard at a local swimming pool and used this as evidence for his key skills in communication. However, some portfolios are poorly presented and not detailed enough.

The following table shows the achievement and retention rates available up to the time of the inspection.

LSC funded work-based learning																
Advanced modern apprenticeships (AMA)																
	2003-04		2002-03		2001-02		2000-01		1999-2000		1998-99					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Number of starts	59		96		52		36		15		12					
Retained*	0		10		26		33	92	8	53	12	100				
Successfully completed	0		5		8		30	83	8	53	12	100				
Still in learning	59		81		26		0	0	0	0	0	0				

\*retained learners are those who have stayed in learning for at least the planned duration of their training programmes, or have successfully completed their programme within the time allowed

## Quality of education and training

52. Staff have a good range of expertise in the process, chemical and petrochemical engineering industries, and good and established associations with employers. Many of the sponsors are large international companies with a strong commitment to training, providing learners with good training opportunities. All learners are employed by TTE and sponsored by industry. Learners carry out an extensive range of activities and make good progress in developing their practical skills. Employers are given comprehensive information about the requirements of the NVQ. Some learners also benefit from their sponsor's own staff training programme. However, training in the workplace is often unstructured and most training opportunities arise through the normal course of the work.

53. The off-the-job training resources for chemical engineering learners are outstanding. TTE owns two fully-operational pilot chemical processing plants on Teesside, used solely for the training and assessment of learners. The plants are built to current industry standards, with manual and automatic control of processes, both locally and from a remote dedicated control room, using microprocessor controls and system monitoring. Working conditions and practices, including obtaining work permits, match those in industry. Learners work in teams to manage all aspects of running the plants, including calculating and dispensing quantities of chemicals, analysing samples, starting up and shutting down the plants, and handing over responsibility for process operations to fellow learners. Tutors are able to introduce a wide variety of performance variations to

test learners' ability to respond to processing plant failures. The plants have an extensive range of electrical and mechanical components, which are effectively used to demonstrate systems and equipment for the benefit of learners on electrical and mechanical engineering programmes. The main training centre also accommodates very good and well-laid-out machinery and equipment for electrical and mechanical engineering training and assessment. Sufficient, modern machinery is provided to meet the needs of learners on most production operations, and a suite of welding bays gives learners experience of a range of welding processes. TTE provides adequate classroom facilities and a lecture theatre.

54. Learners receive good vocational support from experienced and well-qualified training staff. Most of the tutors and the assessment team have been recruited from the industry and have an extensive knowledge and understanding of the local industrial placements. Learners on industrial placements receive good support. Learners have company-appointed mentors, usually in supervisory positions, and those interviewed spoke highly of this support. Assessors support learners in planning their NVQ work. Most work placements include an effective plant induction. Assessors visit learners every fortnight to monitor their progress and review their assessment plans.

55. Mechanical engineering learners have the opportunity to achieve a range of additional engineering-related qualifications, including certificates in abrasive wheels application, crane driving, lifting and slinging and lift truck driving. The achievement of such qualifications adds value to the apprenticeship and raises the esteem and confidence of learners. Learners appreciate the opportunity to achieve these qualifications, and potential employers value the increased flexibility that these additional skills give learners.

56. TTE offers training programmes that are appropriate to a very wide range of engineering disciplines. Three advanced modern apprenticeship frameworks are available in chemical engineering: chemical technician, laboratory technician, and young scientist. Chemical technicians and young scientists work towards a level 3 NVQ in process operations, and laboratory technicians work towards a level 3 NVQ in laboratory and associated activities. The young scientist advanced modern apprenticeship framework includes 40 per cent of a degree in molecular science. Electrical and mechanical advanced modern apprenticeship options include installation, manufacturing, instrumentation, electrical maintenance, mechanical maintenance, fabrication and welding.

57. TTE's arrangements for assessment are satisfactory. It has appropriately qualified assessors and internal verifiers, and a number of other staff who are currently working towards their awards. TTE's staff and learners understand the assessment process well and use realistic work opportunities for assessment and evidence collection. Initial assessment is satisfactory. All learners have an initial assessment of their literacy and numeracy skills and an aptitude test at the start of their training programme. Initial assessment is carried out by the designated TTE assessor, and the results are recorded on learners' individual learning plans. The support for the development of learners' literacy and numeracy skills is satisfactory. Many learners have good GCSE results. This is rarely

## TTE MANAGEMENT & TECHNICAL TRAINING

taken into account in planning key skills training programmes, however, and many learners spend unnecessary amounts of time preparing for, and taking, external key skills exams. Key skills and literacy and numeracy training needs are recorded on the individual learning plan. Literacy and numeracy support from appropriately qualified staff is not provided in the workplace.

58. TTE's internal verification practice varies across the engineering programmes. Sampling is planned on electrical and mechanical programmes, but records do not indicate if a sample is taken during or at the end of a learner's NVQ. No sample planning takes place on chemical engineering programmes, and no monitoring of sampling takes place to ensure that coverage is adequate and appropriate. However, internal verification is satisfactory overall. Each programme area has internal verifier co-ordinators, but no forum exists for them to share best practice.

59. The standard of training is satisfactory. Tutors have a wide range of qualifications and expertise. Most have, or are working towards, a teaching qualification. Lessons are planned and presented effectively. Training notes are clear, appropriate and structured well. Learners receive a good balance of background knowledge and practical training, and trainers make good use of visual aids in the background knowledge sessions. However, these sessions are too long. Some classrooms are bland and uninspiring.

60. The progress reviews for chemical and electrical engineering learners are weak. They are carried out quarterly in the learners' workplace and, in most cases, include comments from the workplace supervisor. However, not enough reference is made to the results of initial assessment and the learners' attainment to date, and the individual learning plan is not updated. Assessors do not make reference to previous reviews, and not enough measurable targets are set for learners. Reviews do not provide a satisfactory feedback process for learners or employers. However, review practice in the mechanical engineering provision was good.

61. On-the-job training plans for electrical and mechanical engineering learners are not sufficiently structured. Learners gain experience from a range of locations within their companies, and tasks are appropriately cross-referenced to NVQ units. However, learning activities are insufficiently planned and learners do not make the best use of their workplace experience as NVQ evidence. There is insufficient planning of tasks, and learners' achievement of qualifications is delayed. Learners' workload is also often unbalanced. Training plans are, however, being implemented in the chemical engineering training programmes.

## Leadership and management

62. Learners are supported well by regular visits from assessors. Staff are fully aware of their responsibilities. Most operational issues are dealt with promptly and effectively. Action plans are effective and regularly monitored. Managers have been successful in raising and maintaining retention and achievement rates. The self-assessment report identified most of the strengths found by inspectors, but none of the weaknesses. Staff have had good equality and diversity training, but equality of opportunity is not

#### TTE MANAGEMENT & TECHNICAL TRAINING

consistently monitored in learners' progress reviews. Staff do not sufficiently share good practice. All staff are appraised by their line managers. Staff training needs are identified, and appropriate staff development takes place.