

# **National Certificate of Educational Achievement**

## **2011 Assessment Report**

### **Technology Level 3**

**90676 Describe technologists' responsibilities to the wider community**

**90677 Analyse an existing multi-unit production process**

**90678)**

**90680)**

**90682) Explain knowledge that underpins an (area) technology outcome**

**90684)**

**90686)**

**90688)**

## STANDARD REPORTS

### 90676 Describe technologists' responsibilities to the wider community

#### ACHIEVEMENT

**Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They typically:**

- provided evidence of two or more professional technologists
- understood that a professional technologist is a person who is directly involved in the design and implementation of a technological outcome
- described the technologists' social responsibilities (legal, moral, and ethical or other responsibilities' specific to the context) to the wider community AND described how these responsibilities impacted (promoted or constrained) on their practice
- understood that the wider community consists of people, environments and organisms
- identified, with examples, how the wider community can be affected by the professional technologists' practice and /or the technological outcome
- described how specific aspects of the professional technologists' practice is impacted by abiding by their social responsibilities.

#### NOT ACHIEVED

**Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They typically:**

- described two professional technologists but did not give detail of the impact of responsibilities on both practices
- showed a lack of understanding that a professional technologist is involved in the design and implementation of a technological outcome and a practitioner is involved only in the labour
- described the practice of one professional technologist and then related it to their own (the candidates') practice
- described their own technological practice and not that of professional technologists
- gave an account of the technologists' qualifications and job responsibilities yet did not identify their responsibilities to the wider community
- identified responsibilities to the wider community yet did not identify how this impacted on the technologists' practice or constrained the technologists' practice
- identified some laws or moral obligations yet did not explain how these were related to the technologists' practice
- identified legal, moral, and ethical responsibilities by referring to the acts / legislations but did not elaborate on who was affected by the practice / identify the wider community
- did not identify the impact (promotion and /or constraint) that these responsibilities had on their practice.

## **ACHIEVEMENT WITH MERIT**

**In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit typically:**

- selected two professional technologists who displayed the depth and detail in their practice required for this standard
- gave clear examples of the legal, moral, and ethical responsibilities of at least two technologists' to the wider community – giving details and examples
- identified and described links between the professional technologists' practice, the outcome being developed and responsibilities to the wider community
- explained in depth *how* these responsibilities promoted or constrained both technologists' practice and then provided specific examples.

## **ACHIEVEMENT WITH EXCELLENCE**

**In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence typically:**

- compared and contrasted both technologists' practice – identifying and discussing their legal, ethical, and moral responsibilities to the wider community
- discussed and gave reasons why and how technologists responsibilities differ depending on the context or situation
- gave a full explanation of how and why the technologists practice is affected by their moral, legal, and ethical responsibilities
- identified and explained what the consequences would be if the professional technologists did not adhere to the legal, ethical, or moral responsibilities.

## **OTHER COMMENTS**

Some candidates are still not reading the intent of the standard and are discussing their own practice rather than a technologist's practice.

On some occasions candidates only wrote about one technologist – the standard states *two or more*.

To achieve this standard, candidates are expected to investigate two technologists within an identified area of technology and explain their social responsibilities to the wider community. This includes their legal, ethical, and moral responsibilities.

A technologist, as defined in the standard, is, 'a professional who is involved in the design and/or development of technological outcomes'. A professional technologist undertakes technological practice in order to create an outcome. Candidates need to establish the technologist's involvement with the design or development of an outcome.

A practitioner e.g. a carpenter or a computer technician who is involved only in the labour of implementing a design is not a technologist.

Successful candidates could identify the wider community that the technologists were socially responsible to and show how the environment and living organisms were considered during the designing and implementation of a technological outcome.

Successful candidates, who used case studies from the internet or journal articles, identified

some of the information required for this achievement standard, and then continued their inquiry research into other sources to ensure they had accessed all the information required to access the standard.

Candidates who compared and contrasted the chosen professional technologists throughout their report discussed in depth and succeeded at the higher levels.

## **90677 Analyse an existing multi-unit production process**

### **ACHIEVEMENT**

**Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They typically:**

- described an existing multi-unit production process that had inputs, outputs, and yields
- identified the key stages or steps of an existing multi-unit production process and described what the influences were on these key stages
- described *how* the development and continuance of the production process impacts on the key and wider stakeholders
- described *how* the development and continuance of the production process impacts on the environment.

### **NOT ACHIEVED**

**Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They typically:**

- showed a flow chart of a multi-unit production process with no understanding of the key stages
- listed key stages but provided no explanation of any influences upon them
- did not consider the impacts of the process on key stakeholders and the environment.

### **ACHIEVEMENT WITH MERIT**

**In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit typically:**

- explained in detail a multi-unit production
- Identified and explained (giving reasons) the influences each stage has on the overall production process
- explained in detail *how* the development and continuance of the production process impacted on the environment
- explained in detail *how* the development and continuance of the production process impacted on the key and wider stakeholders.

### **ACHIEVEMENT WITH EXCELLENCE**

**In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence typically:**

- compared and contrasting at least two multi-unit production processes
- analysed and critiqued the similarities and differences on the key stages and gave examples

- compared and contrasted the impact on key and wider stakeholders due to the development and continuances of the multi-unit production processes
- compared and contrasted how each production process impacted differently on the environment in terms of sustainability, and management during development and continuance.

## **OTHER COMMENTS**

Successful candidates discussed the impacts on key and wider stakeholders and considered the following:

lifestyle changes, changes to the environment

- health issues
- economic issues
- cultural
- political impacts.

Candidates who used set questionnaires or templates to obtain information about multi-unit production processes often did not analyse the information further, as is required to meet the standard. Care must be taken in the development of questionnaires that allow candidates to access the appropriate and relevant information for this standard.

**90678)**

**90680)**

**90682) Explain knowledge that underpins an (area) technology outcome**

**90684)**

**90686)**

**90688)**

## **ACHIEVEMENT**

**Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They typically:**

- identified an area-specific outcome that was developed and implemented by a professional technologist
- explained the area-specific knowledge that guided the practices of a professional technologist in developing a technological outcome
- explained both practice and context-specific knowledge that the professional technologist drew upon and used to underpin the development of a technological outcome.

## **NOT ACHIEVED**

**Candidates who were assessed as Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They typically:**

- described their own technological practice in developing an outcome and not one developed by a professional technologist
- focused on generic aspects of a professional technologist practice and did not give area-specific knowledge that underpinned the development and implementation of an outcome

- identified a professional technologist yet did not identify an actual outcome the professional technologist had developed and implemented
- described a technological outcome and the technologists practice but did not give enough details on how area-specific knowledge had been accessed to develop the outcome
- described the knowledge that related to a generic development of a set of outcomes but did not apply this knowledge to one or two specific outcomes
- used a question-and-answer template with no further explanations to show how knowledge was used in practice and context.

## **ACHIEVEMENT WITH MERIT**

**In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit typically:**

- explained in detail knowledge that supported the development of the identified outcome from a range of different sources
- provided explanations of specific knowledge and how important this knowledge was to developing the identified technological outcome(s)
- explained how the technologists drew upon a wide variety of knowledge to develop a specific technological outcome
- analysed the knowledge that the professional technologist(s) considered and subsequently used to develop an area specific technological outcome.

## **ACHIEVEMENT WITH EXCELLENCE**

**In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Excellence typically:**

- identified two or more outcomes developed by one or more professional technologists
- identified the differences and similarities in the knowledge, both procedural and conceptual, that underpinned the development of two technological outcomes
- discussed and prioritised knowledge and its importance to the developed technological outcomes
- compared and contrasted knowledge using extended abstract thinking
- compared and contrasted how this knowledge was synthesised in the development of the existing technological outcomes
- compared and contrasted key knowledge throughout their report and not just in a final paragraph.

## **OTHER COMMENTS**

Candidates who have accessed resources from Techlink and the internet and then researched for further information and knowledge were most likely to succeed when they reflected, predicted, and hypothesised

Candidates completing gaps in set templates to show evidence of underpinning knowledge often did not demonstrate their understanding of how and why the technologists followed a particular practice to develop an outcome. Templates and questionnaires can prevent candidates from explaining in detail and restrict provision of the detailed knowledge required for this standard.

Candidates whose reports exhibited individual “candidate voice” generally had less difficulty providing the detailed knowledge required.

Successful candidates selected excellent case studies to reflect upon. Choosing a specific outcome to discuss rather than a generic set of outcomes. For example, one chosen web page rather than the generic knowledge required for all web pages or the knowledge required to develop one garment from a collection or season.

Successful candidates selected an outcome(s) that had been developed by a professional technologist and showed understanding that key knowledge was used in the development of the named outcome(s) – for example, the knowledge behind a fashion garment required the technologist to understand the performance qualities of materials, technical processes, trends, key resources, testing and trialling, codes of practice, legislation, and so much more.

Candidates should be encouraged to present only evidence that aligns to these achievement standards. *A portfolio of the candidate's work for the year is not required.*

A technologist, as defined in the standard, is, “a professional who is involved in the design and / or development of technological outcomes”. A professional technologist undertakes technological practice in order to create an outcome. Candidates need to establish the technologist's involvement with the design or development of an outcome. A practitioner e.g. a carpenter or a computer technician who is involved only in the labour of implementing a design is not a technologist.