Exemplar for Internal Achievement Standard

Economics Level 1

This exemplar supports assessment against:

Achievement Standard 90984B

Demonstrate understanding of decisions a producer makes about production

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade boundaries.

New Zealand Qualifications Authority

To support internal assessment from 2014

	Grade Boundary: Low Excellence
1.	For Excellence, the student needs to demonstrate comprehensive understanding of decisions a producer makes about production. This would typically involve: • linking detailed explanations of production decisions with detailed explanations of the consequences for the producer and/or society • integrating supporting data or information into explanations of producer decisions. The student has comprehensively explained what type of producer Ngāti Kahungunu Iwi Incorporated (NKII) is, presenting economic data in a table, and explaining two economic goals of Kahungunu Asset Holding Company (KAHC) using the data (1). The student has explained how sustainable resource use could be achieved, integrating the strategic plan of NKII (2). The resources managed by NKII are identified (2), with an explanation of why the strategic plan includes sustainable resource use (2). An explanation is provided of how the goal of sustainable fishing could be achieved using research and development, and the student explains why this goal has advantages for society is explained (3). The student explains how the goal of protecting the environment can be attained, and the example of Karamu stream is used to explain why this goal has advantages for Ngāti Kahungunu and society (4). The student identifies how the plans and strategies of NKII - used to achieve their goals around sustainable resource use - would have positive consequences for Ngāti Kahungunu and society (5). For a more secure Excellence, the student would include an explanation around some of the other economic goals of KAHC - how and why their production decisions (around farming and horticulture, and/or tourism and hospitality, and/or each marae) would have consequences for Ngāti Kahungunu and/or society.

Ngāti Kahungunu Iwi Incorporated (NKII) is an incorporated society and works together with others such as the Coastal Hapū Collective (CHC) and the Kahungunu Asset Holding Company (KAHC). The Chief Executive Officer's (CEO) job is to communicate on behalf of NKII with the hapū and other organisations. They oversee distribution of iwi funds from the fisheries settlement and write policies to bring to Government. There are six different areas called Taiwhenua Districts, they are Wairoa, Te Whanganui-ā-Orotū, Heretaunga, Tamatea, Tamaki-nui-a Rua, and Wairārapa. The CEO communicates with these areas and with the people and community of Ngāti Kahungunu iwi. 1

The KAHC vision is to build intergenerational wealth for Ngāti Kahungunu and to obtain maximum sustainable returns on their commercial assets as seen in the table below there is growth in the value of the assets held by NKII between 2009 and 2011 of $17.9 million and a change in the types of assets held for Ngāti Kahungunu. They base their objectives on their values that are consistent with tribal values to uphold the mana of Ngāti Kahungunu in all that they do so they may achieve their vision. 1

Fisheries Assets		Non-Fishing Assets		Iwi property Assets	
2009	2011	2009	2011	2009	2011
$30.6million 88%	$47.5million 90%	$3.4million 9%	$3.4milion 6%	$1million 3%	$2million 4%

The three groups (NKII, CHC, and KAHC) work together and have developed a strategic plan to guide the use and management of renewable resources like marine and freshwater fisheries within the Ngāti Kahungunu areas. The strategic plan prioritises local management and the mana of hapū, protecting the fish species and preserving the ecosystem integrity to protect mauri (the life essence and life force possessed by living things). Ngāti Kahungunu hapū and whānau carry responsibilities as kaitiaki to ensure that the resources continue to flourish and grow so that they may be plentiful for Ngāti Kahungunu now and for generations to come. 2

The resources that Ngāti Kahungunu Iwi have to manage is everything within the rohe, from the mountains to the sea, including the sea and freshwater, flora and fauna, and the fisheries money. The area of the sea that they manage is 200 miles from the coast. It is important that these iwi communicate and co-operate with each other so that they may manage the resources sustainably. 2

Ngāti Kahungunu organisations work together to achieve their strategic plan as there is more concern about the decline of abundance of fisheries, especially iconic species like kōura, pāua, and kina. The organisations each have their own mana and responsibilities in respect of fisheries and this strategy is hoped to support the fulfilling of them. This strategy also aims to improve communication and integration between the organisations. These groups within Ngāti Kahungunu have come together because they are concerned about the current state of fisheries and ecosystems within the area and to achieve the strategic plan so Ngāti Kahungunu may continue to protect and preserve their resources. 2

One of the issues that Ngāti Kahungunu face is making sure that the fisheries will continue to grow and flourish so the resources will be plentiful for future generations. A solution to overcome this issue is to set a quota management system that restricts the amount of fish that each person or group is allowed to take. They could also apply some form of recreational licence that would contribute to controlling the number of fish and marine life taken. They also need to make sure that people are fishing the right size and are not taking any undersized fish. To support this goal a new fishing net is being developed which when pulled under the water increases the size of the holes in the net and allows the smaller fish to escape so that they may continue to grow and provide for future generations. 3

Another goal for Ngāti Kahungunu is continuing to protect the environment by keeping it healthy and upholding the health and wellbeing of the community. The organisations and Ngāti Kahungunu are trying to 4

ensure the protection of the environment such as lakes, rivers, streams, and land so that the resources that we have now may be available for the future generations to come and that they will be clean and healthy. A solution for the protection of the environment would be to develop better communication within the community so that the cleaning strategies could be introduced to help purify and uphold the wellbeing of streams and land and other waterways. Another solution to ensure our environment is protected is to set up regulations and standards used by the community that have to be met to prevent or help to clean the polluted waterways and contaminated land sites.

An example of this issue is the polluted stream of Karamu. The Karamu stream was once plentiful with black flounder which was used by the iwi to feed the visitors to the marae, over time the increase of sewerage flowing through the stream because of the farming and animals has resulted in the stream becoming polluted which has led to the depletion of the black flounder. The iwi has come up with a solution to clean the stream and find the black flounder so that they may be regenerated and be plentiful in years to come.

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From the investigation, I have learned that Ngāti Kahungunu manage very important resources in our community and have developed a strategy to try and protect them. I learned that the iwi organisations are very aware of the improvement of the environment especially the marine and freshwater fisheries and have put in plans and strategies so that future generations may be able to enjoy these resources. I believe by encouraging and educating the community about these strategies Ngāti Kahungunu will be able to achieve their goals and be successful in implementing their strategies which will result in the strong and plentiful resources that will be available for the people of future generations and communities. A Māori whakataukī that expresses this quotes that if the ocean and sea is plentiful and abundant the people will continue to thrive and grow in Ngāti Kahungunu. “Tangaroa a mua, tāngata ki muri”.

5

Sources:

Guest speaker and http://www.kahungunu.iwi.nz/

	Grade Boundary: High Merit
2.	For Merit, the student needs to demonstrate an in-depth understanding of decisions a producer makes about production. This would typically involve: • providing a detailed explanation of production decisions • providing a detailed explanation of the consequences of those decisions for the producer and/or society • using data or information to support explanations of producer decisions. The student has demonstrated in-depth understanding by using supporting data from the production process in a detailed explanation of productivity, and the production decisions were linked to consequences for the producer in a detailed explanation. Additionally, the student identified and described two economic goals of KAHC, and explained how the second goal will be achieved using a quota management system and research and development (6). The resources managed by NKII are identified, with an explanation of why the strategic plan includes sustainable resource use (7). The student explains how the goal of protecting the environment can be attained, and the example of Karamu stream is used to explain why this goal has advantages for Ngāti Kahungunu (7). The student also identifies the positive consequences of achieving goals around protecting Ngāti Kahungunu's resources and preserving their assets (8). To reach Excellence, the student would explain how sustainable resource use could be achieved, integrating the strategic plan of NKII. Additionally, explanations would be needed for some other economic goals of KAHC, and of how and why their production decisions have consequences for Ngāti Kahungunu.

Ngāti Kahungunu iwi is a tribe located on the East coast of the North Island. They manage everything in their rohe from the mountains to the sea. Some of the resources which the iwi control are the sea, land, fresh water, plant (flora), animal life and fisheries. The mission for Ngāti Kahungunu is to enhance the mana and wellbeing for the iwi. This will be achieved by empowering the iwi to achieve success at the levels of whānau, hapū and taiwhenua. The Ngāti Kahungunu iwi has set up Kahungunu Asset Holding Company (KAHC) which is a separate organisation who co-operates and manages the fisheries asset. The iwi and the company both work together to sustain resources.

The KAHC have two main goals:

1. Their main goal is to maximise the financial return on the commercial assets of the KAHC, i.e. to make a profit for the iwi.
2. Their second goal is to make sure there is plenty of fish for the future generations. Some of the problems they have are depletion in the quantity and quality of fish by using up the amount of fish.

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For this goal to be successful the KAHC have applied a set quota management system (total allowable catch) so that the quantity and the size of fish caught is protected. The development of a new fishing net that has holes big enough so undersized fish can swim away and not be caught supports this goal of maintaining fish stock in the future.

There is a strategic plan set up by Ngāti Kahungunu iwi for the health of our environment and influence on the health of our people the Kahungunu iwi are increasing the protection for our environment by preserving and protecting our air, water, lands and resources for the benefit and survival of the future generations to come.

7

One solution to protecting the environment is to train and educate our tamariki, the other is to set regulation standards and have environmental clean-up strategies in place for waterways, land management and contaminated land sites.

7

An example of an issue and solution occurring is in the Karamu stream where there was plenty of black flounder flowing through the stream and the local hapū of that area would use the black flounder as kai. Presently the increase of sewerage flowing through the stream caused by dairy farming and pollution has resulted in a decrease in the amount of black flounder left in the stream. The iwi are now planning to clean the stream so that the black flounder can be regenerated and the environment can be protected.

In conclusion I have learnt that Ngāti Kahungunu is a strong iwi with a unique cultural identity that controls a huge amount of resources and is highly aware of protecting these resources and developing solutions for the issues that iwi have to solve. The cultural values of the rohe are important and are developing so that the Ngāti Kahungunu traditional and contemporary culture and language will survive and achieve national recognition. The iwi have future plans for the success of Ngāti Kahungunu and are encouraging participation amongst whānau, hapū and iwi so that the Ngāti Kahungunu iwi is able to grow with a strong, healthy and positive attitude. The examples above are various strategies which the iwi are using to preserve their assets for the future.

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Sources:

Guest speaker and http://www.kahungunu.iwi.nz/

	Grade Boundary: Low Merit
3.	For Merit, the student needs to demonstrate an in-depth understanding of decisions a producer makes about production. This would typically involve: • providing a detailed explanation of production decisions • providing a detailed explanation of the consequences of those decisions for the producer and/or society • using data or information to support explanations of producer decisions. The student has demonstrated an in-depth understanding by explaining production decisions around sustainable resource use and goals using information from NKII, and explained the consequences for Ngāti Kahungunu in detail. Additionally, the student presented production and productivity data in a table (9), and the production process was explained and identified as labour intensive (10). The student also explained how and why division of labour was implemented (11), and specialisation was explained (12). The student also provided reasons for why there were changes in the productivity figures between the first production process and the second one, using the data to explain how production decisions affected productivity (12). The student has also explained the consequences for themselves as producers when the cost of labour is included and advantages for the community if they decide to expand production (13). For a more secure Merit, the student would include more explanation around expanding production and the consequences for them as producers if they decide on a capital intensive production process and possible disadvantages for the workers (14).

	Process One	Process Two
Total Output	13 miniature kete	13 miniature kete
Productivity	13 ÷ 9 = 1.4	13 ÷ 8 = 1.6
	(output ÷ workers)	(output ÷ workers)
Total cost	13 x 9 = $117	13 x 8 = $104
	(wages x workers)	(wages x workers)
Average cost per unit	117 ÷ 13 = $9	104 ÷ 13 = $8

9

We were given a task by the teacher to produce as much miniature kete as we could within an hour. They were only about 8cm wide by 8cm long with small handles. The materials were harakeke that was gathered following Ngāti Kahungunu tikanga (Māori protocol[1]), pāua shells, knives, and scissors all gathered from local areas and from home, so there was no cost of materials. We did not eat or drink in the room where we were weaving, and washed our hands after we had finished, removing any sap before eating kai.
The production was labour intensive and they could be used for putting little presents in and given as gifts. There were 9 workers individually producing as many kete as they could in an hour. At the end of the hour 13 kete were made but were lacking in quality, for some of us didn't know how to make them and I thought it was not a product that would sell in the market.

10

For the second task there were 8 workers split into different units that would be doing different jobs (division of labour). The first unit had 2 workers that split the harakeke into strips, measured and cut them into the right lengths. The second unit of 2 workers were softening the flax strips; the third unit of 2 workers were twisting harakeke to make pairs of handles, and taking the softened strips and making the flat weaved bases for each kete. The fourth unit of 2 workers were folding and finishing the weaving and attaching the handles. The economic theory is that if we split the task into individual jobs amongst each other we'd be a lot faster at producing the miniature kete then our first day of production.

11

The 2nd production day allowed us to get a head start because we knew what we had to do and also knew the quality needed at each step to make a good quality finished kete. When we split the task into steps it should have been a lot quicker as each individual became faster and more efficient at doing their task (specialisation). If everybody worked faster and was more focused it would have led to an increase in productivity and better quality. At the end of the production it showed that we had improved in terms of quality, the finished kete were much better, but we produced the same amount as we did in the first production. We could have produced more if we had worked hard right through to the end of the hour and everyone had helped in the areas that were lagging behind and all moved to the weaving of the kete step; folding, finishing weaving and weaving in the handles instead of doing nothing. However, productivity did rise from 1.4 to 1.6 per person, because we only had 8 instead of 9 people on the second production day, and we made sure all the kete started were finished. The waste harakeke was returned to the area it was taken from, and we gave the first miniature kete we made as gifts to our friends and whānau.

12

12

I don't think we could sell them because they will be expensive, because we would have to pay the workers minimum wage, that's $13 per hour times 8 people which is $104, so we would have to sell them for at least $8 to cover our average costs. In order for us to make a profit we would probably have to sell them for about $12 dollars, but we could sell them a lot cheaper (maybe $5) if we did not have to pay the minimum wage and therefore we could probably make a reasonable profit as there is no cost of materials.

13

[1] **Harakeke: cultivation, symbolism, and harvesting**
Te Papa Tongarewa website: Collections. Topic: Harakeke - New Zealand flax
(Is part of topic *Materials for making Māori cloaks*) http://collections.tepapa.govt.nz/topic/3623

If we were to expand production and create a successful small to medium sized business we could create jobs and that would also be a good consequence for the community.

Example: Selling miniature kete would work best in a small business because I don't think too many people would buy this product on its own. The miniature kete would be best added to a bigger business, for example an arts and crafts type business. You could add a range of sizes and colours (using natural dyes) to add value to the kete.

I think we would use labour intensive methods first to aim for profit maximisation and use the profit to invest capital into the business. This may lead to some of the workers we once had no longer having jobs, but adding capital goods into the production process will make it a lot faster and provide a consistent quality of finished goods…

	Grade Boundary: High Achieved
4.	For Achieved, the student needs to demonstrate understanding of decisions a producer makes about production. This would typically involve: • defining, identifying, describing or providing an explanation of production decisions • identifying, describing or providing an explanation of consequences of those decisions for the producer and/or society • presenting data or information related to producer decisions. The student has demonstrated understanding by explaining production decisions around sustainable resource use and goals using information from NKII, and explaining the consequences for Ngāti Kahungunu in detail. Additionally, the student presented production and productivity data in a table (15), explained the production process, and explained how and why division of labour and specialisation was implemented (16). The student also provided reasons for why there were changes in the production figures between Day 1 and Day 2, and used average cost data to support the explanation (17). The student has explained consequences such as improved quality, reduced costs of production, and economies of scale for the producer if they decide on a capital intensive production process (18). The disadvantages to the community of this decision are also explained (18). The student also understands that decisions a producer makes about production may not always involve profit maximisation (19). To reach Merit, the student needs to also use the productivity data to explain how production decisions affected productivity, and why there were changes in productivity (20).

	Day One	Day Two
Total Output	13 miniature kete	13 miniature kete
Productivity	13 ÷ 9 = 1.4	13 ÷ 8 = 1.6
	(output ÷ workers)	(output ÷ workers)
Total cost	13 x 9 = $117	13 x 8 = $104
	(wages x workers)	(wages x workers)
Average cost per unit	117 ÷ 13 = $9	104 ÷ 13 = $8

15

Day 1: On the first day of producing miniature kete we made them individually. This would be compared with the second day producing them using division of labour and specialisation. The materials were in our working area. These were harakeke (flax) gathered following Ngāti Kahungunu tikanga (Māori protocol), pāua shells, knives, scissors all gathered from local areas and from home, so no cost involved.
There were four steps in producing the miniature kete. The first step was to split the harakeke into even, thin strips, then measured and cut to same lengths; the second step was to soften the flax strips using a pāua shell or the back of a knife. The third step was to make two small handles from twisted harakeke. The final step was to weave the kete and weave the handles into the top. We did not eat or drink in the room where we were weaving, and washed our hands after we had finished, removing any sap before eating kai.
Day 2: on the second day the process was divided up into separate tasks (division of labour). Everyone was put into a group per task and this was expected to increase productivity with specialisation. Two people were put into step 1, step 2, step 3 and step 4. The waste harakeke was returned to the area it was gathered from, and we made sure all the kete started were finished.
From this experience I learned that division of labour can be more effective than producing a kete individually. The benefit of division of labour is that the process becomes quicker and more efficient as workers learn their different tasks and become specialised. This is not what occurred in our kete production, it could have been more efficient if there was better organisation of the production process.

16

I found it difficult to have quality control as everyone didn't discuss or see a model of the final product, therefore our final kete varied in quality. I also found it difficult to complete a kete at a fast rate. To make a reasonable income and profit we would have to sell each kete at a higher price than $9 to cover the average cost and make a profit. It is unlikely that people would buy this product at this price and quality.
I noticed that at the start the workers doing steps 3 and 4 were waiting a few minutes while the other workers on steps 1 and 2 were doing their part. To improve this we could all have split the harakeke and then got into the separate tasks. The output per person increased a little and the total costs and average cost decreased. The price to sell these would be over $8 to earn a profit as well as cover the cost. The quality of the kete improved however the total output remained the same as the first day of production.

17

17

We only produced that amount as there was lack of communication and at times the majority of workers were waiting for the other tasks to be completed. Producing miniature kete was good as we were able to give our first ones as gifts and keep the other ones. The money we could have earned would have been donated to charity. If miniature kete making was put into a business this could provide jobs for students at the school and they would earn an income. Providing jobs (from the business) would increase the cost, as workers would have to be paid the minimum wage per hour ($13).

If our business was to switch from labour intensive to capital intensive this would increase the cost at the start as we'll need to cover the machine and the rent to put the machine(s) in an appropriate place. If we were capital intensive we could guarantee the final product was consistently high quality and have high productivity. Further on in the production the productivity would start to improve which means the costs of production would eventually decrease because the average cost would decrease as our business increases in size and output increases, this is economies of scale.

18

If our business was capital intensive then many worker would lose their jobs, and not being labour intensive would be the opportunity cost and not provide jobs for the community. 18

In reality the future of having a business that produces and sells only miniature kete wouldn't be successful. The best way to make this business successful would be to also produce other goods to add value to the kete or vice versa, but our business would still be small. Our goal could be to provide employment, use local materials and be a non-profit business or charity, not profit maximisation. 19

Example: In the second production process we only had 8 people instead of 9 which reduced our total labour cost to $104 and therefore our average cost as well. 20
Our productivity improved from 1.4 to 1.625, so we produced the same amount of kete (output) with 1 less person, so division of labour did work and the quality of miniature kete improved as we all became better at doing the tasks (more specialised).
With better organisation and more practice we could have actually made more kete with just 8 people, so our productivity could have been 2 per person with an output of 16 miniature kete per hour and average cost could have dropped to $6.50…

	Grade Boundary: Low Achieved
5.	For Achieved, the student needs to demonstrate understanding of decisions a producer makes about production. This would typically involve: • defining, identifying, describing or providing an explanation of production decisions • identifying, describing or providing an explanation of consequences of those decisions for the producer and/or society • presenting data or information related to producer decisions. The student has demonstrated understanding by explaining production decisions around sustainable resource use and goals using information from NKII, and explained the consequences for Ngāti Kahungunu. Additionally, the student presented production and productivity data in a table (21), explaining the production process used (22). The student also explained why division of labour was implemented, and the consequences to Ngāti Kahungunu (as producers) of applying division of labour to the production process (23). The student also describes reasons why production of kete should be expanded for the producer and community (24). For a more secure Achieved, the student could include more description or explanation around how expanding production would improve productivity. The student would also need to identify the consequences for the community and/or producer of the decision to use a labour intensive or capital intensive production process (25).

Student 5: Low Achieved

	Data for day 1	Data for day 2
Total Output	13 miniature kete	13 miniature kete
Number of people	9	8
Productivity/Output per person	1.4	1.625
Total cost (wages)	$117	$104
Average cost	$9	$8

21

Everything was set up for us in class. The materials were laid out for us; harakeke gathered following Ngāti Kahungunu tikanga (Māori protocol), pāua shells, knives, scissors all gathered from local areas and from home, so no cost. For this stage we had to make individual miniature kete to see how many we could produce by ourselves. This was done in one class period. We did not eat or drink in the room where we were weaving, and washed our hands after we had finished, removing any sap before eating kai.
People used different methods but my method was to split the harakeke into even, narrow strips; use my pāua shell to soften the strips; set up my bases for two miniature kete; twist the leftover pieces of softened harakeke strips into two pairs of handles; and then fold the base of one, weaving my first kete.
I only just finished one kete before the bell went. I was rushing so the quality was poor, it was the first time I had done this so was not sure what I was doing in the beginning.

22

The second stage was to make miniature kete as a team. We used division of labour where we got divided up to do individual tasks, my task was to split the harakeke into even narrow strips, and measure and cut the strips ready for the next person who was softening the strips for weaving. We had a model of what the miniature kete should look like and what size to make them all.
We expected to produce at least two each compared to what we could produce individually so we expected to be able to make 16 miniature kete. I think it was lack of motivation and some other things that distracted us, making us not achieve this goal. I have learnt that division of labour would work more efficiently than doing the job individually, for I found it difficult to try and make everything on my own. Working with a group of people made the process faster and easier to keep under control. The waste harakeke was returned to the area it was gathered from, and we made sure all the kete started were finished, so we completed 13 again. And we gave the first miniature kete we made as gifts to our whānau.

23

Using natural materials is better and neater, as we can get these materials for free and they are eco-friendly products so safer for the environment and the community. We could sell these miniature kete to let everyone know a little bit about our Māori culture but you wouldn't make much of a profit if you wanted to make a business only selling miniature kete. We would need to expand our production and to hire more workers to produce and sell other things to go with them and make a range of size and shapes of kete and different colours using natural dyes.

24

Example: We would have to sell our range of kete at different prices to cover worker's weekly wages and for the business to try and make a profit. We would want to advertise our product to make people know what we were selling. If we were to switch from human resources to capital resources workers would start losing their jobs. The company would have to have thousands in hand or borrow from the bank to pay for the machines and then would have to find a space to put them in. This would help increase productivity and maximise profits by…
And/or
The business could stay a labour intensive process so people would have jobs and customers would know what they had bought was handmade. There are small businesses of these kind scattered around New Zealand. The price of a good quality miniature kete would have to be around $10 or more so the business would get a profit and workers would get the minimum wage…

25

	Grade Boundary: High Not Achieved
6.	For Achieved, the student needs to demonstrate understanding of decisions a producer makes about production. This would typically involve: • defining, identifying, describing or providing an explanation of production decisions • identifying, describing or providing an explanation of consequences of those decisions for the producer and/or society • presenting data or information related to producer decisions. The student has partially demonstrated understanding by explaining production decisions around sustainable resource use and goals using information from NKII, and explained the consequences for Ngāti Kahungunu. Additionally, the student presented production and productivity data in a table (26), and the production process was explained (27). The student explained how division of labour was implemented into the production process for the second day (28), and explained why specialisation would improve productivity for the producer (29). To reach Achieved, the student needs to also identify, describe or explain consequences such as improved quality, consistency of size and reduced costs of production, and explain that improved productivity increases profit for the producer (30).

Student 6: High Not Achieved

	Data for day 1	Data for day 2
Total Output	13 miniature kete	13 miniature kete
Number of people	9	8
Productivity/Output per person	1.4	1.625
Total cost (wages)	$117	$104
Average cost	$9	$8

26

Our aim was to see how many miniature kete we could make individually without any source of help except the materials we were given by our teacher. The materials we were given included scissors, harakeke gathered following Ngāti Kahungunu tikanga (Māori protocol), pāua shells and knives. The capital goods such as the desk and chairs were provided by the school.
I did this particular task the way my teacher told me to; there were no personnel problems that occurred during this production process. We did not eat or drink in the room where we were weaving, and washed our hands after we had finished, removing any sap before eating kai.

27

We did the same task on day 2 and worked as a team to produce miniature kete using division of labour. This is a process where we were divided up into groups of two people and each group was doing a different part of the process. The different jobs were to split the harakeke into even, thin strips, then measured and cut to same lengths; the second job was to soften the flax strips using a pāua shell or the back of a knife. The third job was to make two small handles from twisted harakeke. The final job was to weave the kete and weave the handles into the top. The waste harakeke was returned to the area it was taken from, and we made sure all the kete started were finished, and we gave our first miniature kete as a gift to our friends.

28

We hoped to increase output because each person was specialising, we should become better and quicker at each task and so together we should be able to make more. We produced the same amount on the second day; however there were only 8 workers so productivity improved.

29

Example: The number didn't increase by much because of the lack of concentration and poor organisation, but the quality of the miniature kete did improve and they were more consistent in size.
Improving productivity by improving organisation and management would increase production and better quality and consistency results in less materials being wasted, all these things contribute to less costs of production and more profit for the producer…

30