

**Technical Report # 27**  
**Assessment Tools for Teaching and Learning**



**Summary of the Teacher Feedback from the Calibration of  
the asTTle v2 Pānui, Pāngarau, and Tuhituhi Assessments**

**Submitted by the Assessment Tools for Teaching and Learning team,**

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**December 2002**



## **Summary of the Teacher Feedback from the Calibration of the asTTle v2 Pānui, Pāngarau, and Tuhituhi Assessments**

asTTle is funded by the Ministry of Education to Auckland UniServices at the University of Auckland to research and develop an assessment application for Reading, Writing, Mathematics, Pānui, Pāngarau, and Tuhituhi for Years 5-7 (Levels 2-4) for New Zealand schools. We acknowledge this funding, and thank the Ministry of Education for their continued assistance in the development of this project.

This report details the summary of the teacher feedback from the calibration (trials) of the asTTle v2 pānui, pāngarau, and tuhituhi assessments. It has been modeled on earlier reports describing lessons learned from the trialling of English assessments in reading, mathematics, and writing.

I would like to thank all the students and teachers in Maori-medium schools who took time to complete asTTle tasks and provide feedback to the University of Auckland team.

Peter Keegan drafted this report based on data summarized and collated by Ana Pipi. Both made a tremendous contribution to the writing, reviewing, and trialling of the assessment tasks which are evaluated herein.



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December, 2002

The bibliographic citation for this report is:

Keegan, P. & Pipi, A., (2002, December). *Summary of the Teacher Feedback from the calibration of the asTTle v2 Pānui, Pāngarau, and Tuhituhi Assessments*. asTTle Technical Report 27, University of Auckland/Ministry of Education.



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This report details the summary of the teacher feedback from the three calibration (trials) of the asTTle v2 pānui, pāngarau, and tuhituhi assessments held in late 2001 and in the first half of 2002.

### The asTTle Project

The Assessment Tools for Teaching and Learning (asTTle) ‘*He Pūnaha Aromatawai mō te Whakaako me te Ako*’ project delivers a computer based set of tools for classroom, teacher-controlled assessment of student progress in literacy and numeracy at Levels 2 – 4 of the New Zealand curriculum in both Te Reo Māori and English. Specifically, this includes Pānui, Tuhituhi, Pāngarau, Reading, Writing, and Mathematics. Now by the Ministry of Education to schools, asTTle is a classroom assessment tool for teachers.

The asTTle tool provide teachers with the ability to track progress and achievement of individual students or groups/subgroups of students. Teachers design an asTTle test by selecting the curriculum areas and levels of difficulty that they wish to assess. These selections are maximised by the asTTle tool to create a 40-minute pencil and paper test consisting of a mixture of open- and closed-response items. Once student responses and scores are entered into the asTTle tool teachers may select a range of reports that allow them to interpret student performance by reference to nationally representative norms, curriculum levels, and curriculum achievement objectives. Specifically, asTTle answers questions related to (a) how well are students doing compared to similar students, (b) how well are students doing on important achievement objectives, (c) how well students

are doing compared to curriculum achievement levels, and (d) what are some teaching resources that would assist in improving students' performance.

### **Methodology**

Teachers '*kaiako*' participated in a variety of *wānanga* 'workshops'<sup>1</sup> held in Auckland, Hamilton, and Whakatāne run by the asTTle team to write and review assessment items for pānui, pāngarau and tuhituhi. Their task was to write and review assessment materials appropriate to the interests, achievement objectives, and ages of students in Years 5-7 learning in curriculum levels 2-4 consistent with the principles of the appropriate curriculum document and consistent with good Māori-medium classroom practice. It is important to note that all forms were in Māori only. Once reviewed, items were assembled into test forms (i.e., trial papers) designed to take 40 minutes for the majority of students. Each form had an approximately equal distribution of items or tasks across the Curriculum Levels 2 to 4 and all were administered to students at any of the target year levels. Note that the test forms as administered were balanced in quite a different fashion to the tests generated using asTTle computer tool. asTTle allows teachers to custom select the difficulty desired regardless of the year or age of students. For example, a teacher using asTTle can create a test with no or few hard items for a younger or less able group of students and vice versa.

Calibrations or trials for asTTle assessments across the pānui, pāngarau, and tuhituhi subject areas were conducted on behalf of asTTle by classes of students in Māori-medium schools. These included kura kaupapa Māori, bilingual/immersion schools, and schools with bilingual/immersion units or classes. There are about 2,500 students in Maori-medium instruction in each of the target years 5—7.

In order to prevent over usage of this small number of students, the calibrations were staggered over four terms. Each calibration was administered by teachers with their own class of students. In most cases all students completed at least one form from each of the subject areas being calibrated.

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<sup>1</sup> Although most of attendees were practising Māori-medium teachers, other Māori educators (most of whom were ex-teachers) including post-graduate students, teacher support services staff, university lecturers, researchers, and teacher training providers also attended. The *wānanga*, following Māori protocols was open to all interested Māori educators.

## Teacher Feedback of asTTLe V2 Pānui, Pāngarau and Tuhituhi Assessments

There were three calibrations, one held in late 2001 and the other two in 2002. These are provided in Table 1 with the number of schools and students participating in each subject.

Each teacher who administered the tests was asked to complete a questionnaire (in English). Evaluative feedback was sought around the quality of the items, specifically their appropriateness in terms of interest or engagement, difficulty, length of time needed to complete, and around the quality of the instructions supplied with the test forms. In addition, teachers were asked for their own general comments, and were asked to summarise the nature of students' experience and evaluation of the materials. asTTLe used the teacher feedback to modify the asTTLe tool by adjusting the language, content, or nature of items, the length of time allowed for completing items, and the administration instructions supplied to teachers.

### Results

The total number of schools and students participating in each trial are presented by content area in Table 1. Most schools trialled all of the papers available at each calibration (i.e., all subject areas). A few schools completed pāngarau papers only. A small number completed pānui and tuhituhi but not pāngarau. The student numbers show how many student scripts were returned, clearly indicating that many students completed more than one paper. The school totals show how many different schools undertook tasks in each subject area. Many schools participated in two trials, and several participated in all three trials. On average, each school provided about 35 scripts per subject which is consistent with the small size of Maori-medium schools and units.

Table 1  
*Number of Students and Schools participating in Each Calibration by Subject*

Calibration	Pānui		Pāngarau		Tuhituhi	
	Schools	Students	Schools	Students	Schools	Students
	(n)	(n)	(n)	(n)	(n)	(n)
(1) November 2001	62	1037	63	1055	-	-
(2) March/April 2002	72	1367	74	1421	88	1207
(3) June/July 2002	54	1118	52	1060	59	997
Total	110	3522	111	3536	114	2204

The number of teacher responses for each content area by trial are presented in Table 2. The

return rate of teacher responses was usually around 60 percent (assuming one teacher per school), which is quite acceptable.

Table 2  
*Number of Teacher Responses by Subject and Calibration*

Trial	Pāngarau			Pānui			Tuhituhi		
	Schools (n)	Teachers (n)	Return Rate (%)	Schools (n)	Teachers (n)	Return Rate (%)	Schools (n)	Teachers (n)	Return Rate (%)
1 Nov. 2001	62	41	66	63	41	65	-	-	-
2 March 2002	72	51	71	74	51	69	88	51	58
3 June 2002	54	33	61	52	33	63	59	33	60

In the calibrations most of the students undertook tasks from all content areas being trialled. In many cases the same teacher supplied responses to questions on all three content areas. Sometimes different teachers provided responses and on many occasions it was not possible to identify whether or not the same teacher was responding to all questions.

Responses were in the nature of comments to prepared questions. The comments were generally coded using a “Yes”, “No”, “Both yes and no”, or “No answer”. The category “Yes” indicates a favourable or positive response to the question; “No” an unfavourable or negative response to the question, and “Both yes and no” indicates a response that contains both positive and negative comments. “No answer” includes comments that were incapable of meaningful interpretation. Although the questionnaires were written in English many teachers provided written comments in Māori or used a combination of Māori and English.

### *Content Appropriateness*

This section asked whether the content was appropriate for students’ age and ability in the teacher’s class. The results are presented in Table 3. Teachers were reasonably positive about content for pāngarau and pānui, and slightly less positive for tuhituhi. However, a somewhat higher no answer rate for tuhituhi may explain some of the discrepancy.



Table 3.  
*Appropriateness of Content*

Subject	Number of Responses (Percent)				Total
	Yes	No	Both	No Answer	
Pāngarau	98 (78.4)	10 (8)	12 (9.6)	5 (4)	125
Pānui	98 (78.4)	8 (6.4)	1 (.8)	18 (14.8)	125
Tuhituhi	54 (64.3)	9 (10.7)	5 (6)	16 (19)	84

Overall, teachers were positive. While many teachers simply gave a ‘yes’ response to this question others provided extra comments. Sixteen teachers provided positive comments about the items often noting that they were challenging and engaging for students.

Thirteen teachers noted that some questions were too difficult for their students. Six teachers noted that the vocabulary in some items (especially pāngarau) was new or unknown to the students. Another six teachers noted that some of the (tuhituhi) writing genre were difficult for their students. Six other teachers noted that the students had difficulty with the items. It was not always clear from teacher comments whether students had difficulty understanding the instructions, stimulus material, or the questions themselves. Several teachers reported that their students had difficulty with the instructions. The difficulties experienced may be partially explained by the nature of trial papers which contained Level 2 to 4 tasks and were assigned to students in Years 5—7. Therefore, students in Year 5 would have encountered some items targeted at students at level 4 of the curriculum, potentially causing comprehension problems due to the nature of language use. It should be noted that, in pāngarau, the items used terminology derived from the Pāngarau Curriculum (Ministry of Education, 1996). However, there is some anecdotal evidence that classroom pāngarau vocabulary is not consistent through out Māori-medium programmes in New Zealand (Keegan, 2000).

*Content Interest and Engagement*

This section asked whether the content was interesting and engaging for students. Teachers were very positive about pāngarau and less positive about tuhituhi, again with a higher no answer rate for tuhituhi (Table 4).

Table 4.  
*Content Interest and Engagement*

Subject	Number of Responses (Percent)				Total
	Yes	No	Both	No Answer	
Pāngarau	107 (85.6)	1 (.8)	6 (4.8)	11 (8.8)	125
Pānui	106 (84.8)	1 (.8)	3 (2.4)	15 (12)	125
Tuhituhi	55 (65.5)	7 (8.3)	14 (4.8)	18 (21.4)	84

Additional comments provided for this question were similar to those provided for content appropriateness. Several teachers reiterated concerns that some genre were difficult, others noted that some items were difficult, and that students had difficulty understanding the instructions.

*Teacher Instructions*

This section asked whether the administration instructions were clear and sufficient. All the administration instructions were in English. Overall, teachers were very positive about the instructions. The results are presented in Table 5, with a noticeable higher no answer rate for tuhituhi.

Table 5.  
*Teacher Instructions*

Subject	Number of Responses (Percent)				Total
	Yes	No	Both	No Answer	
Pāngarau	113 (90.4)	3 (2.4)	0 (0)	9 (7.2)	125
Pānui	103 (82.4)	3 (2.4)	2 (1.6)	17 (13.6)	125
Tuhituhi	63 (75)	4 (4.8)	0 (0)	17 (20.2)	84

## Teacher Feedback of asTTLe V2 Pānui, Pāngarau and Tuhituhi Assessments

### *Level of Difficulty*

This section asked whether the level of difficulty was appropriate for students' age and ability. As previously noted many year 5 students would have encountered questions designed for higher curriculum levels. Teacher reports were very positive for pāngarau and pānui, and slight less positive for tuhituhi. The results are presented in Table 6, showing once again a high no answer rate for tuhituhi.

Table 6.  
*Level of Difficulty*

Subject	Number of Responses (Percent)				Total
	Yes	No	Both	No Answer	
Pāngarau	98 (78.4)	9 (7.2)	7 (5.6)	11 (8.8)	125
Pānui	97 (77.6)	3 (2.4)	5 (4)	20 (16)	125
Tuhituhi	50 (59.5)	6 (7.1)	9 (10.7)	19 (22.6)	84

Several teachers noted that the tuhituhi instructions had to explained verbally to their students as the written instructions alone were not sufficient for some students.

### *Student Response*

This section asked about students' responses to asTTLe tasks. Teachers reported that students were generally positive towards pāngarau and pānui, but slightly less positive towards tuhituhi. The results are presented in Table 7.

Table 7.  
*Student Response*

Subject	Number of Responses (Percent)				Total
	Yes	No	Both	No Answer	
Pāngarau	78 (62.4)	13 (10.4)	26 (20.8)	8 (6.4)	125
Pānui	85 (68)	4 (3.2)	18 (14.4)	18 (14.4)	125
Tuhituhi	31 (36.9)	17 (20.2)	19 (22.6)	17 (20.2)	84

The teachers provided a great deal of additional comments on students' responses to the tasks. There were many more positive comments about pāngarau and pānui compared to tuhituhi. Pāngarau attracted the most 'both' comments. The most common 'not so positive' comment on pāngarau concerned the task vocabulary, whereas for tuhituhi it was difficulty understanding the instructions. Tuhituhi attracted the least number of favourable comments. Table 8 presents the additional comments regarding student responses.

Table 8.  
*Additional Comments on Student Responses*

Comment	Number of Teacher Responses		
	Pāngarau	Pānui	Tuhituhi
<b>Positive Comment</b>			
good topics	4	3	1
wide range, good coverage	4	1	1
challenging	9	3	1
enjoyed, fun, interesting, <i>tino pai</i> 'good'	24	27	2
<b>Neutral Comment</b>			
mixed reactions, some students OK, others not	18	13	8
<b>Not so Positive Comment</b>			
vocabulary new, difficult or unknown	28	10	4
language too difficult	8	6	1
difficulty understanding item(s)	9	4	5
difficulty understanding instructions	2	3	10
too easy (questions)	6	9	-
too (some questions) hard	16	16	8
(some) genre difficult			3
student language insufficient	-	1	3
content not yet covered	2	-	-
student(s) did not like task	5	1	5
initially apprehensive, <i>mataku</i> 'afraid'	2	4	2
short time	3	7	5

### *Concluding Comments*

Many teachers expressed their thanks and noted that the trials had been a valuable experience. A number also commented that they were interested in seeing the student results. Negative comments included vocabulary issues which have been already noted and concerns about the difficulty of items for some students. Several teachers suggested that the students should be given more time for the tasks. Others raised concerns about the difficulty of some genre for students. Three teachers reported that their students spent too much time in the planning phase of the tuhituhi tasks.

## Teacher Feedback of asTTLe V2 Pānui, Pāngarau and Tuhituhi Assessments

Suggestions for improvement mostly concerned the short notice of the trials, teachers suggesting that early notification would have helped. Several teachers commented that some of the graphics in several items did not print well. A couple of teachers requested vocabulary lists of terms used in the items. The concluding comments are presented in Table 9.

Table 9.  
*Concluding Comments*

Subject	Number of Teacher Responses (Percent)					Total
	Positive	Negative	Both/Neutral	Suggestions for Improvements	Missing	
Pāngarau	41 (32.8)	15 (12)	4 (3.2)	8 (6.4)	57 (45.6)	125
Pānui	34 (27.2)	5 (4)	3 (2.4)	8 (6.4)	75 (60)	125
Tuhituhi	17 (20.2)	5 (6)	8 (9.5)	8 (9.5)	46 (54.8)	84

### Conclusion

Three main areas of concern were noted by teachers which have been addressed by the asTTle team. First, item difficulty was an area of concern for some teachers. Note that this will be somewhat ameliorated when teachers use asTTle as they will be able to customise the fit of item difficulty to the expected ability of students. Additionally, asTTle has reduced the range of item difficulty in each of its trial papers by assigning trial papers to set years (e.g., Year 5) and thus more narrowly focusing the difficulty of items to the expected level of ability for each year level. Secondly, the need of some teachers for earlier notice of upcoming trials to ease planning has been addressed by longer range planning and communication. Thirdly, the greatest concerns expressed were about the students' not knowing the task or item vocabulary. It was often not easy to distinguish from teacher comments as to whether this was a problem with the items themselves or that the students lacked the required prior vocabulary knowledge. asTTle has addressed this concern by having teacher panels review asTTle items to fit expected ability of students at each curriculum level.

The overall teacher response to these three asTTle pāngarau, pānui, and tuhituhi trials was very positive and many enjoyed undertaking the trial papers. This gives users confidence that the materials can be successfully used in Maori-medium classrooms.

## References

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