Submission to the Standing Committee on Education and Vocational Training

Outline of Flick MTick

The dilemma of all involved in education, in simple terms, is three fold;

- a. What do students already know?
- b. What have students learnt?
- c. How effective am I as a teacher?

At present most tests provide a very limited picture, a raw score or percentage per student which does not identify the deficits in learning or the quality of instruction. While educators have been required to provide reasons why students haven't learnt there have not been any effective resources which have enabled them to conduct this research in depth in the classroom.

Add to this dilemma of local accountability, the need to provide Australian students with internationally acceptable education and the problem is gigantic.

This is where Flick//Tick comes into its own.

Flick/VTick is a computer software package which can provide assessment of 90 students in less than 2 minutes, when students have answered multi-choice questions on paper. Using an average school photocopier (60 scans a minute) connected to a computer the results are scanned, processed and stored on the computer ready for the teacher's perusal.

The important aspect of this software is that it provides the teacher with:

- a. an analysis of test reliability
- b. how the class handled each question (direct feedback on how well the teacher has taught the class). Ref. Annex A.
- c. student strengths and weaknesses by strand. Ref. Annex B.

When students start off in a new class or school traditionally the teacher has a vague understanding of his/her pupils' prior learning. Flick/Tick has the capacity to change this as it can provide an in-depth analysis of students' strengths and weaknesses.

None of this has been available to the classroom teacher until now. Analysis of this quality has been the domain of external testing authorities whose feedback occurs a long time later and at some expense.

The difficulty of knowing the quality of each question in a test has been a real hurdle to effective assessment as teachers neither had the time or resources to determine this. Flick NTick has solved this by providing such a facility which rates each question and provides for amalgamation of classes to validate this over a larger population. Ref. Annex C.

Flick/VTick also has facility for assessment of written work, using rubrics. The analysis from this has proven to be eyebrow raising as it discloses details in the same way as multi-choice questions, assisting the teacher to be better aware of his/her weaknesses in pedagogy and disclosing gaps in student learning that are not revealed in conventional assessment.

Teachers with laptop computers could take them to class with a portable sheet fed scanner (Ref. Annex D) and gain feedback on their student's work thus providing 'real time' quality assurance of their teaching programs.

During our field trials we found that teachers using their own tests were able to easily identify students' needs, apply specific remediation and see a positive improvement in student performance.

With your support of FlickNTick it will be possible for Australian education to lead the world as teachers will be able to fine tune their teaching programs to better assist their students while eliminating the vagaries of the past. Ref. Annex E. At long last teachers will be able to provide evidence based learning programmes and reports.

Enclosures:

- Annex A: Class results per question & reliability of the test.
- Annex B: Student results per strand compared with their peers.
- Annex C: Larger population (combination of four classes) results per question, degree of difficulty and discrimination per question along with the reliability of the test.
- Annex D: Laptop and portable scanner in use.
- Annex E: Case study

Annex A to Flick/Tick submission Standing Committee on Education and Vocational Training

	ick - Analysis	Statis	tics															
< 🕘																		
		F	lie	ck	NΤ	⁻ic	k (ີຊຸມe	est	io	nΑ	na	lv	sis				
		-						onofa								1	5 March	h 2005
est:	Grad	le 3 S				Benc									of this '	Test (K	(R20)	
lasses	s: Grac				2004													
ample	Size: 26											0 0.1	0.2	0.3 0.4	4 0.5 1		' 0.8 0	
												Ľ						· ·
	Percentage	Difficulty (%Wrong)							Index of Discrimination									
umber	Answered Correctly	Easy 0	20	40	60		lard 100		eading -0.8		-0.4	Non -0.2	-effec	tive	0.4	0.6	Effect 0.8	tive
umber 1	96	:	20	40												0.0	0.0	4
2	36 88				N N	ast	ery	Test	- St	aus	tics	not	app	blica	ble			
3	69																	
4	42																	
5	42 69																	
6	77																	
7	50																	
8	62																	
9	50																	
10	81																	
11	58																	
12	35																	
13	85																	
14	85																	
15	4																	
16	19																	
		0	20	40	60	80	100	-1	0.8	-0.6	-0.4	-0.2	0	0.2	0.4	0.6	0.8	1

L

Annex B to FlickNTick submission Standing Committee on Education and Vocational Training



Annex C to Flick*N*Tick submission Standing Committee on Education and Vocational Training

S FlickN	Tick Analysi							- -			1.34			
		Flic	CKNI	Tick (Jues	TIOI	n Ar	naiy	SIS					1
		(Fo	r further	explanatio	on of ana	lysis r	efer to h	andbo	ok)	01 L	lecembe	r 2003		
Test Na		de 7 Engl	ish				Γ	Re	eliability o	f this Test	(KR20)			
Classes	s: 7E	2 English	: 03-Jun-	2003				04.05	0 2 0 4	0000	7000			
		: 03-Jun					1	0.1.0.2	5 U.3 U.4	0.5 0.6 0	1.0.0 U	Dreter		
		1: 04-Ju]		
Sample	Size: 91	: 04-Jun	2003											
Campio	0120, 31													
	Percentage Answered	Diffi Easy	culty (%Wr	ong) Hard	Mislead	alie:		x of Disc Non-effe	riminatio	n	Effect	iva		
Number		Casy 0 20	40 60	80 100	-1 -0.8			1.2 0	0.2	0.4 0.6		4		
1 1	93			3 1		1	3) 	++	1 1	1	4		. 4
2	54	1 6				3	4	1 3		-	1			
3	40	1 8		• 3 [19 <u>3</u>									
4	80		1	3 1		3	1			4 1				and the second
5	26	1 6					- j 🛁		4 (4 4				
6	63) kj	4 - 1			4					1	ų.		9
7	44				3 3						4	- ÷		
8	43		-{		8 8	1	4 3			-	1			
.9	54					지 것 같								
10	22				김 작		1		~~}•	÷ 1	1			4
11	29		j j_	.				1 1	- Jan		1			1
12	29				3 4			1		.	4			
13	44				34		3	4	-					1
14	64	1 [_	.	2		1	4	1 3				-{		
15	36		일 📥	.		1		a 31. 1 4		-	1			- All and a second s
16	36		1 斗	-				1	<u>i di seconde s</u>					- And Andrews
17	40		-							-	i			
18	75	1 · <u></u>) <u></u>	-	e]	1			1
			il.	in the second large second large second s	և չ առում ս	ann È man		Ly manufactures	د مدینه شده از این د مدینه شده از این میکنونه شده			<u></u>		NAMES AND ADDRESS OF ADDRESS OF ADDRESS OF ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADDRESS ADD

Annex D to Flick*N*Tick submission Standing Committee on Education and Vocational Training



Annex E to Flick*N*Tick submission Standing Committee on Education and Vocational Training

Case Study

During our field testing in 2004 a teacher in a trial school could not answer a series of questions in the National grade 5 literacy bench-mark test.

He was a teacher of grade 5 students and when asked to provide the correct answers for us on the day the school was doing its benchmarking (we had been asked to provide the school with its bench-mark results on the day) he explained that he had never been able to do such test questions.

The point we wish to make is that he had achieved tertiary training and yet still had real gaps in his education due to the vagaries of traditional teaching and assessment. He had achieved sufficiently well in other aspects of his assessments that they masked his gaps in learning.

How many others in our community are like this?

Australia can make considerable advances in education through the wise use of Flick*N*Tick thus reducing many of the hurdles that currently frustrate teacher success in assisting students to progress.

This is a Flick/NTick Grade 3 Literacy Bench Mark result sheet from last year showing that although Chris Kelly (not his true name) gained 62.5% for the test (traditional assessment) he has a real gap in his learning. Only through the use of Flick/NTick is this made apparent and completed on campus in real time at no cost, as the scan function is free on most photocopiers.

