

Making progress? ITE students' engagement with formative assessment: a research note

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Assessment is for learning has been an important initiative in Scotland drawing on the work of the Assessment Reform Group (Black & Wiliam 1998, Black et al. 2002). The current study follows up previous research (Cowan 2009) on implementation of formative assessment by student teachers on school placements at one Scottish university. Differences were evident between primary and secondary students in use of specific classroom strategies and factors influencing implementation. Students on the one year PGDE programmes were more likely to say there was insufficient time in campus courses for formative assessment than students on the four year undergraduate programme.

The Assessment is for Learning (AifL) initiative encouraged Scottish teachers to enhance children's learning by developing formative assessment in the classroom (Hutchinson & Hayward, 2005). It drew explicitly on Black & Wiliam's (1998) research review. Among crucial principles identified and then later evaluated in their King's Oxfordshire Medway Formative Assessment Project (KMOFAP) were developing thoughtful dialogue about learning with pupils; sharing the aims of learning; feedback on ways to improve performance; and also developing pupils' own tools for evaluating learning (Black et al. 2002, 2003). Specific classroom strategies implemented with KMOFAP teachers included giving detailed written feedback as comments rather than marks; sharing with learners learning intentions, success criteria and the standard required for a good performance; and developing pupils' peer assessment capabilities (such as 'two stars and a wish'). The teachers also worked to improve their questioning skills especially giving children more time to think out responses ('wait' time); expectations of all pupils answering (using 'no hands up'); and encouraging pupils' evaluation of their own learning (e.g. pupils 'traffic lighting' their work by indicating 'green' for good understanding, 'amber' for some understanding and 'red' for little or no understanding).

During the AifL initiative, academics tried to embed understanding of the formative assessment principles into initial teacher education (ITE) programmes and encouraged use of KMOFAP strategies during placements (Cowan 2009). There are most frequent routes into teaching in Scotland are the specialist four year undergraduate Bachelor of Education (BEEd) degree for teaching children of primary age (3-12 years); and the one year post degree Professional Graduate

Diploma in Education for either primary (PGDE P) or secondary subjects for pupils aged 12-18 years (PGDE S). A four year undergraduate joint degree in a subject with a concurrent primary or secondary subject teaching qualification is also available in some universities in Scotland and was introduced at the research site in session 2008-9.

Previous research had identified significant differences in confidence and employment of the KMOFAP strategies for BEd4 (final year) students in the three academic sessions between 2004-6 at one Scottish university (Cowan 2009). More students in the later cohorts stated they were confident and more employed a range of formative assessment strategies daily. In session 2005-6, the BEd4 (primary) cohort was compared with students on the PGDE S. Generally, more BEd4 students were confident and more employed strategies daily than the PGDE S students. More BEd4 students than PGDE S students saw supportive teachers as encouraging use of formative assessment and shortage of time as a barrier to its implementation. Unsurprisingly, given their intensive one year programme, more PGDE S students stated additional support should have been offered on formative assessment within campus courses than BEd4 students on their four year degree.

This note reports on the extension of that previous research in session 2006-7 to include students on all three relevant ITE programmes at the university: BEd4, PGDE S and PGDE P. The data was gathered in surveys completed during workshops toward the end of the academic year (late May/early June) after completion of the final school placement before graduation and subsequent entry to the induction scheme. The survey items consisted mainly of four point Lickert type scales. Several items also allowed for extended comments by the students. Participation in the surveys was high: 79% for both BEd4 and PGDE S cohorts and 64% for PGDE P students. To identify differences between the cohorts, the data was analysed using chi-square tests for independence. To meet test requirements on response rates, items were grouped dichotomously as agree/disagree (Tables 1 and 3) or into three categories - strategies used daily/weekly/less often (Table 2).

RESULTS AND DISCUSSION

Most students, regardless of programme, were placed in schools already using formative assessment and experimented confidently and consistently with at least one strategy on placement (Table 1). Two differences between the groups of students were statistically significant - more PGDE P students indicated they had worked with teachers modelling formative assessment strategies than either BEd4 or PGDE S students and more of the secondary students than either primary group felt schools encouraged their use. This differed from previous findings (Cowan 2009). Many primary schools had been early adopters of AifL and this difference perhaps indicates an attempt by secondary schools in the year of the current study to 'catch up' with the initiative.

Table 1: Students' experiences of implementing formative assessment strategies

KMOFAP strategies	BEd4		PGDE P		PGDE S		Chi Sq	p value*
	Strongly Agree/Agree %		Strongly Agree/Agree %		Strongly Agree/Agree %			
School already using strategies	86		89		93		3.24	ns
School encouraged their use	79		83		94		11.6	0.01
Teachers modelled strategies	79		93		81		11.5	0.01
Used at least one confidently	98		98		99		0.08	ns
Used at least one consistently	98		97		99		1.62	ns
	n= 63		89		173			

*2 degrees of freedom

Table 2: Students' use of specific formative assessment strategies

KMOFAP strategy used daily (d) or weekly (w)	BEd4		PGDE P		PGDE S		Chi Sq	p value*
	%		%		%			
	d	w	d	w	d	w		
Sharing learning intentions	83	14	92	4	90	5	7.69	ns
Sharing success criteria	87	10	85	4	78	12	9.46	ns
Open questioning	84	10	89	8	83	10	3.66	ns
Thinking/Wait Time	86	3	89	6	80	10	7.87	ns
'No Hands up'	56	13	56	21	47	10	9.86	0.05
Peer assessment	30	59	28	57	31	48	6.35	ns
'2 Stars and a wish'	30	40	15	28	23	31	8.39	ns
Self assessment	51	35	36	44	31	48	8.97	ns
'Traffic lighting'	54	11	75	10	30	18	48.8	0.001
Detailed feedback	62	32	46	31	27	50	30.3	0.001
	N = 63		89		173			

* 4 degrees of freedom

Differences in use of the various formative assessment strategies between the student groups were generally small - less than 10% for daily use (Table 2). However, there were statistically significant differences between the cohorts in giving detailed feedback and 'traffic lighting'. The quick self assessment tool of 'Traffic lighting' was used more by PGDE P than BEd4 students (76% to 54% on a daily basis respectively) but by less than a third of the PGDE S students daily. A few of the latter specifically commented it was 'too babyish' for use with secondary pupils.

Primary teachers work closely with the same class throughout the school day whereas secondary teachers teach several different classes and many more pupils within each day. Unsurprisingly, more students in both primary ITE groups used detailed feedback on a daily basis than did the secondary students. More BEd4 students used such feedback than PGDE P students (62% compared to 46% respectively). Again this might have been expected as the PGDE groups were on a very intensive one year programme but the BEd4 students had been on placement during the three previous years of their degree and had opportunities to discuss formative assessment frequently on campus, in schools and experiment with classes during these earlier years of AifL implementation nationally.

Table 3: Factors influencing implementation of formative assessment strategies

ITE cohorts session 2006-7	BEd4 Agree %	PGDE P Agree %	PGDE S Agree %	Chi Sq	p value*
Favouring factors					
Used ARG readings	98	62	84	35.3	0.001
Used LTS website 2/+ times	97	86	81	9.5	0.01
Campus inputs helped KU	98	89	83	10.4	0.01
Tutor advice on visits helpful	84	94	91	5.09	ns
Had used <i>AifL</i> previously	94	91	79	15.0	0.001
Attended in-service in school	46	9	58	50.7	0.001
Attended Council in- service	16	5	27	15.6	0.001
Inhibiting factors					
Insufficient on <i>AifL</i> on campus	11	53	54	34.3	0.001
Not enough time to implement	51	35	50	12.7	0.01
Lacked time to train pupils	57	47	71	24.8	0.001
Negative teacher attitudes	16	8	32	19.4	0.001
Poor behaviour by children	17	16	42	25.0	0.001
N=	63	89	173		

*2 degrees of freedom

Specific questions in the survey targeted factors that might have influenced students' uptake of these strategies (Table 3). On campus, all three student groups were specifically directed to the classic publications (e.g. Black & William, 1998; Black et al, 2002; Black et al, 2003) as required reading for seminars and

assignments. They were also required in workshops to access Learning and Teaching Scotland's AifL website (www.ltscotland.org.uk/assess).

Even so, there were statistically significant differences between the groups - fewer PGDE P students accessed the readings and more BEd4 students used the LTS website (Table 3). Previous experience with AifL (perhaps on previous placements or as classroom assistant/parent helper) was significantly greater for both primary groups compared with the secondary cohort.

The majority of students found campus inputs on formative assessment helpful but there were again statistically significant differences between the groups. More PGDE students both primary and secondary indicated not enough time was devoted to the initiative on campus. Given the intensive nature of these 36 week programmes, these findings were expected. For secondary students, more detailed questions indicated that 85% agreed that there should be more on formative assessment in their Professional Studies and 88% that there should be more in their Subject courses.

In-service experiences were very different for the PGDE P cohort compared to the two other groups. One factor accounting for this difference was the pattern of placements for the PGDE P and PGDE S cohorts. Secondary students were on placement during the main school in-service dates in both November and February but the PGDE P students were back on campus at those times. In addition, BEd4 students were on longer placements that included February and so also had more opportunity for involvement with inset compared to PGDE P students. The result was that most PGDE P students missed out on this reinforcement for their practice in session 2006-7 – a factor addressed in the placement pattern adopted for the new combined PGDE programme in 2007-8.

Other placement factors identified as inhibiting formative assessment use indicated more PGDE S students perceived they lacked time to train pupils in use of the strategies. This was again expected given the shorter placements in this one year programme exacerbated by summative assessment pressures in secondary schools. More secondary students also agreed that pupils' behaviour and negative teacher attitudes were barriers than either primary group.

These findings give an indication of three groups of ITE students' confidence and experience in using formative assessment in June 2007. Using Black et al.'s (2003) typology, most students seemed to be at least static pioneers using one or two strategies successfully. Many students were moving pioneers already using one or two strategies and looking to develop more within their future teaching. Some had developed understanding and strengths in formative assessment but it was too soon to see them as experts who had embedded a range of strategies and ideas into their practice. However, few students seemed to be triallers who had not embedded any strategies into practice. While additional research to follow students into the induction year would have been valuable, these results were helpful in evaluating this aspect of the programmes and highlighting differences between the experiences of these three student groups.

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