

Prioritising students in Assessment for Learning: A scoping review of research on students' classroom experience

Julie Arnold 

Queensland University of Technology,
Brisbane, Queensland, Australia

Correspondence

Julie Arnold, 149 Victoria Park Road, Kelvin
Grove Queensland 4059, Australia.
Email: j7.arnold@qut.edu.au

Abstract

Assessment for Learning (AfL) is important in policy and practice in secondary schooling across the globe. It is associated with teacher expertise, student agency, a dialogic classroom climate, and a commitment to the needs of all learners. Research about AfL often includes measuring the efficacy of selected practices or foregrounding the role and experience of teachers. Less prominent is literature examining student experience, which is problematic, given AfL's generally agreed aim of orienting learners as evidence seekers, interpreters, and decision-makers. This scoping review examined 75 empirical studies published since 2002 that provided evidence of the lived experiences of secondary school students when teachers facilitated AfL pedagogical practices. A conceptualisation of student experience as comprising six interrelated dimensions, ranging from recognition of classroom practices to integration with experiences beyond the classroom, is proposed in the thematic arrangement of results. Findings show student experience as responsive to changes in teacher practice when students are co-practitioners of AfL and developers of disciplinary expertise. The pedagogic power of students as evaluators is affirmed in

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evidence that positive student evaluation of the worth or value of a practice is an important precondition for productive student experience. AfL further contributes to a generative experience of learning when it enhances dialogic interactions, with students and teachers as partners in moving learning forward. Inclusive AfL and discipline-specific AfL practices are evident but under-represented in the field. The video abstract for this article is available at <https://youtu.be/L8HI-KlSkLs>.

KEYWORDS

assessment for learning, formative assessment, student agency, student experience

Context and implications

Rationale for this study

How students experience assessment for learning (formative assessment) pedagogies in secondary school classrooms influences the success of teacher implementation initiatives.

Why the new findings matter

This scoping review highlights opportunities for AfL research on enhancing classroom interaction, disciplinary-specific practices, and diverse learning needs. It proposes a multi-dimensional analytic frame drawn from findings across 75 studies.

Implications for practitioners, educators, researchers and software developers

Very few studies consider the AfL experiences of students with disability. This is an urgent area for further research. Gaps in knowledge about the effects of discipline-specific AfL practices and experiences are presented as a challenge for the field. Students will benefit from deliberate teaching about AfL purposes and processes, and from consistent messaging at school and system levels that position students as powerful agents at the centre of classroom practice. More research is needed about the interrelatedness of the dimensions of student experiences proposed in this paper. Teachers would benefit from knowing more about connections between out-of-school experiences and cultural values that affect school learning.

INTRODUCTION

The prominence of Assessment for Learning (AfL) is underpinned by the established research base and appeal of its core practices: clear learning intentions and shared success criteria; strategic questioning and other activities that elicit evidence of learning; quality feedback; and peer- and self-assessment (AERO, [n.d.](#); Black & Wiliam, [1998b](#), p. 89; Hattie, [2012](#); Wiliam, [2011](#)). One recommendation for addressing the enduring difficulty

of realising the AfL priority of improving learning and results (Birenbaum, 2016; DeLuca et al., 2019; Marshall & Drummond, 2006) is to seek a greater understanding of student experiences of AfL (Carless & Lam, 2014; Thiessen & Cook-Sather, 2007).

This scoping review examines the research literature that provided evidence of how students experience AfL pedagogical practices in secondary schools. AfL has particular relevance for secondary learners as assessment systems privilege high stakes measures of student performance that do not typically prioritise the needs of individual learners. The focus on secondary school in this paper further acknowledges that secondary school students will experience a wider variety of AfL practices. Secondary students learn from more teachers, each with various discipline-specific expectations and practices (Cisterna & Gotwals, 2018; Havnes et al., 2012; Hodgen & Marshall, 2005; Pryor & Crossouard, 2010). AfL is ideally suited to secondary contexts as adolescent students are expected to develop cognitive and metacognitive knowledge and be more capable of the self-regulation required in AfL (Dignath & Büttner, 2008; Hattie et al., 1996; Seidel & Shavelson, 2007). The student's experience of AfL provides a sense of coherence and utility in the secondary context as they move from teacher to teacher, and subject to subject. The concept of student experience of AfL is defined below, then Arksey and O'Malley's (2005) scoping review methodology—which was used to select and review 75 studies published since 2002—is outlined.

LOCATING STUDENT EXPERIENCE IN AFL

Student experience is central in the definitions of AfL that informed this review. This is acknowledged in: the deliberate listing of students first in each definition 'because only learners can learn' (Klenowski, 2009); foregrounding classroom student actions, interactions and relationships in the learning process (Stobart, 2008); and casting students in the role of partners, with teachers, in their learning (Black et al., 2007; Swaffield, 2011). Consensus at the first international conference of the Assessment Reform Group in 2002 defined AfL as 'the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there' (Broadfoot et al., 2002). AfL represented a 'new way of thinking' (Heritage & Harrison, 2020, p. 23) that connected assessment with learning in a student-centred pedagogical approach. Momentum for this undertaking was catalysed by the *Inside the Black Box* systematic review suite (Black & William, 1998a; Black & William, 1998b) about the potential of classroom-based assessment practices to improve learning and promote the role of students as agents in the classroom.

An updated definition followed in 2009, foregrounding students as equal partners in assessment and learning, and AfL as continuous practice:

Assessment for learning is part of everyday practice by students, teachers and peers that seeks, reflects upon and responds to information from dialogue, demonstration and observation in ways that enhance on-going learning. (Klenowski, 2009, p. 264)

The problem that student-centred assessment practices were not yet well established in classrooms was highlighted in this definition and in the 10 principles promoting the role of the student in AfL. These principles are reproduced in Table 1, alongside elements that foreground the role of the learner.

Accountability pressure on teachers, schools and systems draws teacher attention from the needs and experiences of individuals and diverse student groups and encourages traditional patterns of organisation in schools and classrooms. AfL provides mechanisms for a

TABLE 1 A Summary of Research-based Principles of Assessment for Learning (Broadfoot et al., 2002)

Principles	How the learner's role is foregrounded
1. AfL should be part of effective planning of teaching and learning	to provide opportunities for both learner and teacher to obtain and use information about progress towards learning goals
2. AfL should focus on how students learn	so learners should become as aware of the 'how' of their learning as they are of the 'what'
3. AfL should be recognised as central to classroom practice	so both teachers and learners are involved in reflection, dialogue and decision making about how learning can be improved.
4. AfL should be regarded as a key professional skill for teachers	for example, skill in giving feedback to learners and supporting learners in self-assessment
5. AfL should be sensitive and constructive because any assessment has an emotional impact	recalling that comments focused on the work rather than the person are more constructive for both learning and motivation
6. AfL should take account of the importance of learner motivation	by protecting the learner's autonomy, providing some choice and constructive feedback, and creating opportunities for self-direction
7. AfL should promote commitment to learning goals and a shared understanding of the criteria by which they are assessed	because learners need to understand what it is they are trying to achieve—and want to achieve it
8. Learners should receive constructive guidance about how to improve	so learners can plan the next steps in their learning
9. AfL develops learners' capacity for self-assessment so that they can become reflective and self-managing	because independent learners have the ability to seek out and gain new skills, new knowledge and new understandings
10. AfL should recognise the full range of achievements of all learners	so that all learners achieve their best and have their efforts recognised

more equitable assessment relationship ‘where students and teachers could have a shared expectation that finding out what makes sense and what doesn't is a joint and worthwhile project, essential to taking the next steps in learning’ (Shepard, 2000, p. 10). To be successful in this project, it is insufficient that teachers enact AfL practices without knowing about their students’ experience; however, there is a lack of research on student experience in schools (Carless & Lam, 2014; Thiessen & Cook-Sather, 2007). Instead, advice about AfL pedagogy focuses on teacher strategy implementation, with students remaining the more passive recipients of instruction (Adie et al., 2018). AfL researchers have thus called for more investigation of the experiences of students for varied disciplines, cultures, and educational needs (Charteris & Thomas, 2017; Cumming & Van der Kleij, 2016; Heritage, 2018). Others point out the continued imperative of students, including younger students, actively reporting on their own experiences, rather than having them represented by others (Bourke & MacDonald, 2018). These efforts to understand the student experience of learning from the point of view of the learner are crucial to the goal of enabling learners as powerful agents in the classroom.

A definition of student experience of AfL

At the heart of this scoping review is the concept of student experience of assessment for learning (AfL)—an interest in how AfL plays out for students, from their point of view. While the term ‘experience’ is widely used in empirical studies, it is rarely defined and

alternatives are common, the thread being a representation of the student point of view and a recognition that this matters for learning (Brookhart, 2003; Brown & Hirschfeld, 2008; McInerney et al., 2009). *Conceptions* are constructions generated in studies—often quantitative studies or surveys in combination with supporting qualitative data—that offer representations of the reality, ‘inclusive of attitudes, perceptions, dispositions and other terms that suggest belief about a phenomenon’ (Deneen & Brown, 2016, p. 4). *Perspectives*, sometimes used interchangeably with *perceptions*, is a more general term. It is used variously to refer to study participants (Carless & Lam, 2014; Gurhy, 2017), theory (Broadfoot, 2017; Fletcher, 2018), place (Klenowski, 2009; Lee & Yin, 2011), author, or a combination of these (Backman et al., 2019). Perspectives are gathered in papers that seek to communicate the opinions of students about various assessment practices or juxtapose the intent of the teacher with the received experience of the student (Guloy et al., 2020). Perceptions literature is sometimes distinguishable from perspectives in that the focus tends to be on students’ evaluation of the worth or utility of discrete areas of practice (Brooks et al., 2019; De Backer et al., 2019). In this paper, a broad conceptualisation of student experience is used such that any of these lenses provide evidence of how students experience AfL pedagogies.

This review draws on pragmatic philosophy to conceptualise student experience. Peirce’s Pragmatic Maxim calls for the clear comprehension of a concept or object in terms of its practical effect in the world such that ‘our conception of these effects is the whole of our conception of the object’ (Peirce, 1903/1998, p. 289). AfL pedagogy has a demonstrably pragmatic character because its practitioners are concerned with the tangible, practical effects of a suite of practices intended to have a positive effect on student learning outcomes. Fellow pragmatist and educational reformer, Dewey, also proposed that what actually happens provides the clearest indication of experience, and that mis-educative experiences have ongoing consequences for students, ‘arresting or distorting the growth of further experience’ (Dewey, 1938/1986, p. 247). Thus, student experience of AfL is defined as:

the practical effects on students, reported from their point of view or observable in their classroom behaviour, when teachers facilitate classroom practices identifiable as AfL.

Focusing attention on studies that contribute rich descriptions of these effects enables the challenges and opportunities for making the most of AfL pedagogies to be identified and explained.

METHOD

A scoping review has been selected for this study because it is an ideal tool for determining the coverage, volume, and focus of a body of literature (Munn et al., 2018). The methodology is defined as ‘a form of knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence and gaps in research related to a defined area or field by systematically searching, selecting, and synthesizing existing knowledge’ (Colquhoun et al., 2014, p. 1924). Arksey and O’Malley’s seminal description of the scoping review (2005) is a highly cited process that provides an excellent methodological foundation (Levac et al., 2010), especially when combined with adequate descriptions of key concepts to guide the scope of the inquiry and an iterative approach to study selection (Colquhoun et al., 2014). The approach involves five iterative steps: (1) identify the research question; (2) identify relevant studies; (3) select studies; (4) chart the data; (5) collate, summarise and report the results. In order to contribute a rigorous and transparent review to the

TABLE 2 Scoping review search terms and results

Data base	Search terms	Limiters	Results
ESCO Host (ERIC and EdSource)	"assessment for learning" OR "formative evaluation" OR "formative assessment" OR "classroom assessment" (SU)	peer reviewed, English, not post-secondary, not pre-school, from 2002	438
A+	AND experience OR agency OR voice OR self-regulation OR interaction OR views OR perspective OR perception OR self-assessment OR "peer review" OR emotion OR social		161
ACER and AARE			84
Google Scholar			200
Total			883

literature about AfL, these steps, including the relevant applications of iterative and consultative processes to achieve a fulsome account of the literature, are detailed below.

Stage 1: identifying the research question

To answer the research question *How do students experience assessment for learning pedagogies?* key concepts generated a breadth of coverage (Arksey & O'Malley, 2005), reserving the task of setting parameters to limit references until Stage 3. Acceptable alternative terms were required for the key concepts, to ensure relevant studies were located. Experiences as reported by students' conceptions, perceptions, perspectives, and also evident in attitudes, observed behaviours, and accounts of these by others were included.

To ensure the search would identify papers relevant to the range of pedagogical practices of AfL, 'formative assessment', 'formative evaluation', and 'classroom assessment' were included. The papers selected for consideration investigated AfL pedagogical practices individually or severally, or in association with related assessment for learning activities. In doing so, they documented the practical effects on students, reported from the students' point of view or observable in their classroom behaviour, when teachers facilitated classroom practices recognisable as AfL, including:

1. Clarifying learning intentions and success criteria.
2. Engineering effective questioning and classroom discussions.
3. Providing feedback that moves learners forward.
4. Activating students as owners of learning.
5. Activating students as instructional resources for one another. (William & Thompson, 2008)

Stage 2: identifying relevant studies

The search strategy included electronic databases, reference lists, and hand searching of key journals. It was later refined by reflecting on initial results, acknowledging the value of consultation (Colquhoun et al., 2014; Levac et al., 2010), and conducting a validation process with local and international experts in the field.

Databases

Database searches (refer Table 2) were made on Ebsco Host (ERIC and EdSource), followed by A+ Education (via Informit) and Google Scholar. Ongoing search alerts in Google Scholar and Scopus allowed for the addition of relevant papers that were discovered by scanning reference lists, hand-searching in relevant journals, and checking search alerts until the search was concluded on 31 December 2020.

An iterative sorting process was used to manage the initial results. Titles and abstracts were scanned and papers well outside the scope were set aside. These included pre-school, elementary or university-based studies or studies concerned with formative evaluation in standardised testing. Next, I consulted the reference lists of relevant empirical studies—which had been selected through the database searches—and systematic and scoping reviews in the field (Van Der Kleij et al., 2019; Van der Kleij & Lipnevich, 2020). Hand-searching was also completed for the last two years of each journal represented in

the selection. These processes did identify further references but a redundancy point was reached where no new studies were identified.

Stage 3: selecting studies

The search generated 883 papers, 586 after duplicates were removed (Figure 1); of these, 188 were included in the EndNote collection for systematic screening. The mechanism to select and eliminate studies was twofold. First, iterative readings of the texts were used to identify patterns of information related to student experience that the study authors had either explicitly documented or implied in their descriptions of the research findings. These included: type of study; context of study; theoretical orientation to AfL pedagogies; primacy and relevance; and documentation of student experience in the methodology and reporting. Finally, 75 were selected for detailed reading and analysis.

Stage 4: charting the data

Key items of information (see Table 3) were charted from the included papers for the purposes of interpretation and synthesis. Three aims underpinned this stage of inquiry ‘so that its “outcome” is contextualised and more understandable to readers’ (Arksey & O’Malley, 2005, p. 26). The first was to scope out the range of research where the experiences of students have been included, noting secondary subjects and country. The second was to attend to which students were included and whether student diversity was considered. Third, relevant findings were charted to record the range of student experience.

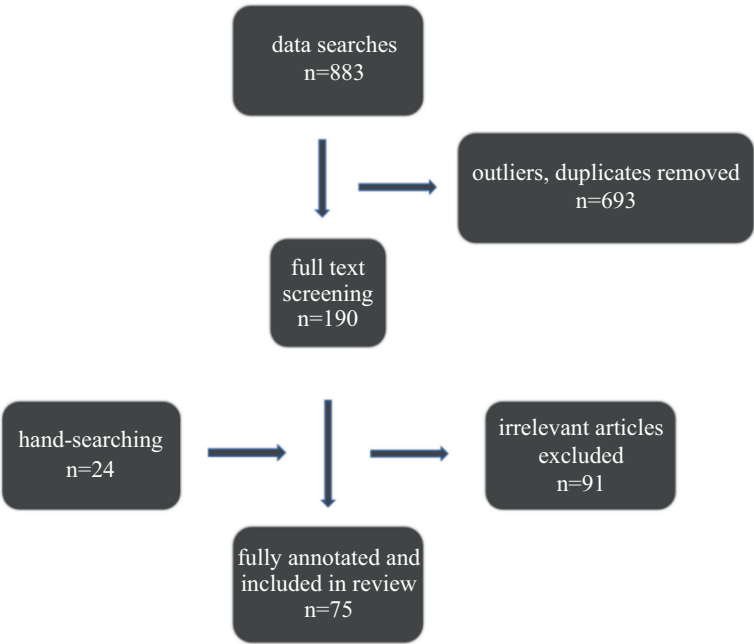


FIGURE 1 Scoping review search strategy

TABLE 3 Charting the data

<i>General information</i>
a. Author(s), year of publication, study location
b. Participants, including school subjects studied where relevant
c. Aims of the study
d. Methodology and data collection procedures
e. Key findings
<i>Data related to AfL pedagogies</i>
a. Working definition or alternative term for AfL
b. Consideration of diversity
c. Theoretical or conceptual framework
d. AfL practices
<i>Information particular to student experience</i>
a. Definition of experience, if any
b. Centrality of student perspective
c. Student experiences of AfL pedagogies

Stage 5: collating, summarising and reporting the results

Next, detailed reading and analysis supported the mapping of key concepts and sources of evidence (Arksey & O'Malley, 2005; Colquhoun et al., 2014). Six interrelated dimensions of student experience were identified and refined through the analytic process, to support the detailed review: (1) knowledge of and affiliation with the processes and purposes of AfL; (2) affective responses to teacher facilitation of AfL practices; (3) evaluation of the worth or value of AfL as it is enacted in classrooms; (4) awareness of agency in classroom assessment processes; (5) active and interactive responses in a cycle of evidence-based learning; (6) interactions beyond the immediate classroom context that contribute to assessment and learning (Table 4).

DESCRIPTIVE RESULTS

The selected studies represent a broad range of research designs, including experimental and quasi-experimental methods, traditional mixed method studies, descriptive survey designs, case studies, discourse analyses, and design-based and action research projects. They also represent a range of quantitative (n = 18), qualitative (n = 18), and mixed methods (n = 17), remarkably evenly spread over methodological categories.

There are notable trends in publication time, place and school subject. Table 5 indicates a marked acceleration in publications, especially in 2019 and 2020. Norway (n = 12) and New Zealand (n = 11) lead the way in investigating student experience of AfL pedagogies, followed by Australia (n = 6), the UK (n = 6) and the USA (n = 6).

Studies by school subject are indicated in Figure 2. As might be expected, a large number (n = 33) reported on studies across various subjects or were not associated with a subject. English, with English as foreign language (n = 11), science (n = 9) and physical education (n = where all the studies except one originate in Scandinavian countries) are strongly represented.

TABLE 4 Summary of papers by dimension of student experience

#	Author/s	Year	Dim. 1	Dim. 2	Dim. 3	Dim. 4	Dim. 5	Dim. 6
			Recognitio	Affect	Evaluation	Agency	Inter/action	Connectedness
1	Aarskog	2020	Y			Y	Y	
2	Anderson et al.	2007	Y	Y			Y	
3	Bartholomew et al.	2019	Y	Y	Y		Y	
4	Birenbaum	2016	Y	Y	Y		Y	
5	Blanchard	2008		Y	Y	Y	Y	
6	Bourke	2016	Y		Y	Y	Y	Y
7	Bourke & Mentis	2013	Y	Y		Y	Y	Y
8	Burner	2016	Y	Y	Y	Y	Y	
9	Burns	2012	Y	Y	Y	Y	Y	
10	Carvalho et al.	2014	Y		Y			
11	Charteris	2015	Y	Y	Y	Y	Y	
12	Charteris & Smardon	2019					Y	
13	Cowie	2005	Y	Y	Y	Y	Y	Y
14	Cowie & Moreland	2015	Y		Y	Y	Y	Y
15	Crichton & McDaid	2016	Y	Y	Y	Y	Y	
16	Crossouard	2009	Y		Y	Y	Y	
17	Deluca et al.	2018	Y		Y	Y	Y	
18	Eckes & Wilde	2019		Y	Y			
19	Figa, J et al.	2020	Y					
20	Foley	2013	Y	Y	Y		Y	
21	Gamlem	2015	Y	Y	Y	Y	Y	
22	Gamlem & Munthe	2014		Y			Y	
23	Gamlem & Smith	2013	Y	Y	Y	Y	Y	
24	Gashi Shatri & Zabeli	2018	Y	Y	Y		Y	

TABLE 4 (Continued)

#	Author/s	Year	Dim. 1	Dim. 2	Dim. 3	Dim. 4	Dim. 5	Dim. 6
			Recognitio	Affect	Evaluation	Agency	Inter/action	Connectedness
25	Goh & Walker	2018	Y	Y		Y	Y	Y
26	Harks et al.	2014	Y	Y	Y		Y	
27	Harris et al.	2018	Y			Y	Y	Y
28	Harris et al.	2014	Y	Y	Y		Y	
29	Havnes et al.	2012	Y		Y	Y	Y	
30	Hill & Edwards	2019	Y	Y	Y	Y	Y	
31	Hirsh	2020	Y	Y	Y	Y	Y	
32	Hogan	2019	Y	Y	Y	Y	Y	
33	Hott & Brigham	2020	Y		Y		Y	
34	Hue et al.	2015	Y		Y	Y		Y
35	Hume & Coll	2009	Y	Y	Y	Y	Y	
36	Hung & Hoi	2010	Y		Y		Y	
37	Irawan & Saliya	2017	Y	Y	Y		Y	
38	Jönsson et al.	2018	Y		Y	Y	Y	
39	Kerr	2017	Y	Y	Y	Y	Y	Y
40	Krijgsman et al.	2020	Y	Y	Y		Y	
41	Krijgsman et al.	2019	Y	Y		Y		
42	Kyaruzi et al.	2019	Y	Y	Y	Y	Y	
43	Lee	2007	Y	Y	Y	Y	Y	
44	Leirhaug	2016	Y		Y			
45	Leirhaug, & Annerstedt	2016	Y		Y			
46	MacPhail & Halbert	2010	Y		Y	Y	Y	
47	McLaren	2012	Y	Y	Y		Y	
48	Miedijnsky & Tal	2009	Y	Y	Y	Y	Y	Y

(Continues)

TABLE 4 (Continued)

#	Author/s	Year	Dim. 1	Dim. 2	Dim. 3	Dim. 4	Dim. 5	Dim. 6
			Recognitio	Affect	Evaluation	Agency	Inter/action	Connectedness
49	Pat-El et al.	2015	Y		Y			
50	Peterson & Irving	2008		Y	Y	Y	Y	Y
51	Plank et al.	2014	Y	Y	Y	Y	Y	
52	Rached & Grangeat	2020			Y		Y	
53	Rakoczy et al.	2019	Y	Y	Y	Y		
54	Rotsaert et al.	2017	Y	Y	Y			
55	Saliu-Abdulahi & Hellekjær	2020	Y	Y	Y	Y	Y	
56	Shogren et al.	2020	Y			Y	Y	
57	Sicherl Kafol et al.	2017	Y	Y	Y	Y	Y	
58	Slavit & deVincenzi	2019	Y	Y	Y			
59	Tay	2015	Y	Y	Y	Y	Y	
60	Tay & Kee	2019		Y	Y		Y	
61	Tolfors	2019	Y	Y		Y	Y	
62	Tong & Adamson	2015	Y	Y	Y	Y	Y	
63	Torkildsen & Erickson	2016	Y	Y	Y		Y	
64	Tsivitanidou et al.	2011	Y		Y	Y	Y	
65	van der Kleij	2020	Y	Y	Y	Y	Y	
66	van der Kleij	2019	Y		Y	Y	Y	
67	Van Gennip et al.	2010	Y		Y			
68	Vattøy & Gamlem	2020		Y		Y	Y	
69	Vattøy & Gamlem	2019				Y	Y	Y
70	Vattøy & Smith	2019	Y	Y	Y		Y	Y
71	Vogt et al.	2020	Y		Y			

TABLE 4 (Continued)

#	Author/s	Year	Dim. 1	Dim. 2	Dim. 3	Dim. 4	Dim. 5	Dim. 6
			Recognitio	Affect	Evaluation	Agency	Inter/action	Connectedness
72	Willis	2010	Y	Y	Y	Y	Y	Y
73	Willis	2011	Y	Y	Y	Y	Y	Y
74	Xiao	2017	Y	Y	Y	Y	Y	
75	Yin & Buck	2015	Y	Y	Y	Y	Y	

Note: Bold Y = paper is presented as an example in the results.

TABLE 5 Results by year and country of publication

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Australia				1	1							1	2	1	6
Belgium											1				1
Canada												1			1
China									1		1				2
England		1	1												2
Ethiopia														1	1
France														1	1
Germany								1					2		3
Greece															1
Hong Kong	1			1					2						4
Iceland												1			1
Indonesia											1				1
Ireland				1											1
Israel			1							1					2
Kosovo												1			1
Australasia												1			1
Europe														1	1
Norway						1	1	1	1	3			2	3	12
New Zealand		1	1				1	2	2	1			2		11
Portugal								1							1
Scotland						1				1					2
Singapore									1				1		2
Slovenia											1				1
Sweden										1			1	1	3
Switzerland							1								1
Tanzania														1	1

TABLE 5 (Continued)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
The Netherlands				1					1				1	1	
UK											1				1
USA	1					1							2	2	6
Total	2	2	3	4	2	3	3	5	8	7	5	5	14	11	75

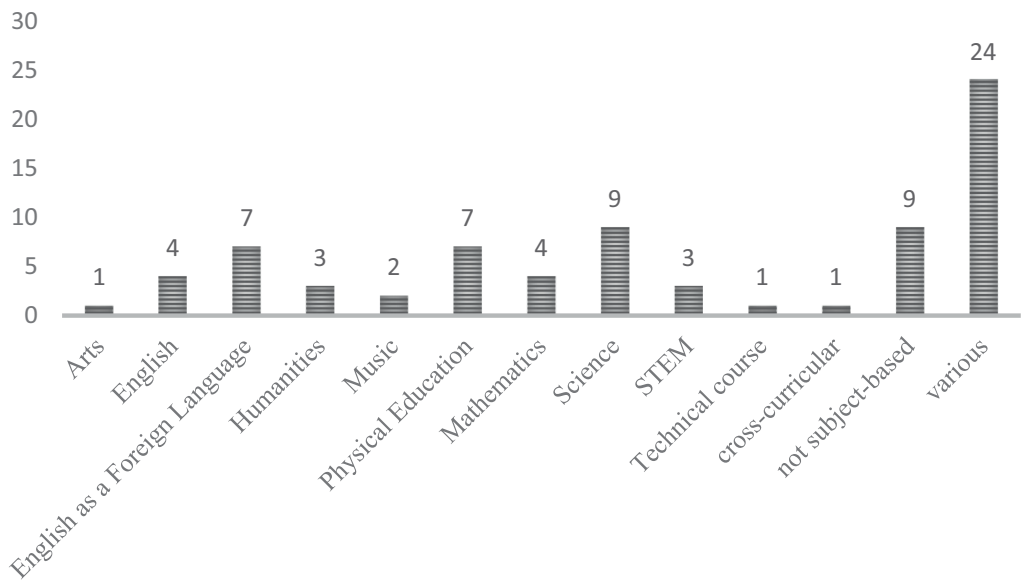


FIGURE 2 Results by subject

Fourteen studies considered group or individual learner characteristics, half of which specifically investigated the experiences of learners with diverse educational needs. In these seven papers, student experiences were reported by socio-economic status ($n = 3$), autism spectrum ($n = 1$), emotional and behavioural difficulties ($n = 1$), ethnicity ($n = 1$), giftedness ($n = 1$), and disability ($n = 1$). A further ten papers examined multiple demographic or previous performance variables, and three referred to diversity as a priority but did not present evidence related to particular groups. In other words, nearly all of the papers used homogeneous groupings in their consideration of AfL student experience.

RESULTS BY DIMENSION OF STUDENT EXPERIENCE

Six overarching thematic categories, or dimensions, provided an organising schema to support a more comprehensive analytic description of the conceptual breadth of student experience of AfL than is currently evident in the literature. Each dimension is an aspect of a tangible practical effect of AfL, expounding the definition of student experience. Within each dimension, key themes and insights elicited from iterative reading and analysis are presented. Papers appear more than once because they offer insights across dimensions and amongst thematic sub-categories (refer [Table 6](#)). In keeping with the aim of this paper, to situate the experience of the student at the centre of AfL processes, each dimension is accompanied by an orienting question.

Dimension 1: knowledge and affiliation ($n = 66$)

Students experience AfL when they know AfL practices are happening and have a purposeful association with them. Students in these studies variously: did or did not recognise AfL practice; knew about AfL but did not always see themselves as having a role; and, when experiencing close affiliation with AfL, could experience metacognitive awareness of the purposes and processes.

TABLE 6 Dimensions of student experience of assessment for learning pedagogies

Dimensions	Orienting questions	Thematic sub-categories
1. Knowledge of and affiliation with AfL pedagogical practices	<i>What do I see, hear and do that signals AfL is happening?</i>	• Recognition without metacognition • Recognition without affiliation • Knowledge <i>and</i> affiliation
2. Affective responses to teachers' facilitation	<i>What emotions do I feel?</i>	• Emotions influenced by student evaluations • Emotions influenced by social processes and developing learner identity
3. Evaluation of the effectiveness or point of AfL practices	<i>Do I value AfL practices?</i>	• AfL practices improve dialogic interactions • Student evaluations of teacher feedback • Challenges and opportunities for AfL practice
4. Awareness of agency, or conversely of being 'done to' within AfL processes	<i>How powerful am I in these practices?</i>	• Students as aware of not having power in the classroom • Student awareness of agency is malleable • Difficulties with student agency
5. Active and interactive responses in which students seek, interpret and use evidence	<i>Am I engaged in an interactive feedback cycle?</i>	• Student actions as seeking, interpreting, and using information • Student experience as interactive • Where student actions and interactions are mis-educative
6. Connectedness, expressed as interactions beyond the immediate classroom	<i>What interactions, beyond the classroom, are relevant to my learning?</i>	• Connectedness as catalyst for shifting classroom power dynamics • Personal experiences and cultural values affect continuity in learning

Recognition without metacognition—Students showed recognition of AfL practices in quantitative studies of conceptions or perceptions (3, 24, 33, 34, 41) and qualitative or mixed-method studies (17, 19, 27, 28, 64, 75). In Hott and Brigham (2018) quasi-experimental study of students with behavioural and emotional disorders in the USA, students showed they were familiar with cards or digital response systems intended to encourage interaction and elicit evidence of student progress when they responded to survey questions about them, but understanding the dialogic AfL purposes was not a feature of this study. A further 12 studies measured student perceptions of feedback via surveys or interviews where students did not need knowledge of AfL to formulate a response (2, 10, 20, 21, 25, 26, 37, 41, 42, 55, 66, 70). For example, senior mathematics students in Tanzania (Kyaruzi et al., 2019) recognised the formative nature of their teachers' feedback practices via the survey design. In one Norwegian study, students were regarded as assessors 'through perception and reflective experience, through individual and social processes' (Aarskog, 2020, p. 11). Data from physical education classes indicated students automatically, unreflectively initiated practices recognisable as AfL, like eliciting and interpreting information, even when their teachers did not deliberately facilitate them.

Recognition without affiliation—Students can know about AfL practices but may not be purposefully aligned with their intent (9, 29, 49, 54, 58, 63). This phenomenon was recognisable even for studies in strong AfL policy contexts (6, 8, 31, 37, 38, 43, 44, 45). For example, focus group interviews with 102 final-year Swedish students elicited descriptions of teachers' assessment-related instructional actions (Hirsh, 2020). Students could identify a range and high volume of assessment practices but it seemed to make no difference to their overall experience whether the purposes were formative or summative. Bourke (2016) reached a similar conclusion. Interviews, lesson observations and document analysis indicated students knew about self-assessment because it was used as a strategy in the school but little of the underpinning educative intent.

Knowledge and affiliation—22 studies provided evidence of students' metacognitive awareness of the purposes and processes of AfL (4, 11, 13, 14, 15, 16, 23, 30, 32, 36, 39, 46, 47, 48, 51, 57, 59, 61, 67, 74) including for students with disability and additional learning needs (7, 56). Some involved explicit skills development for students (30, 47); that is, the intervention itself developed AfL knowledge and affiliation. For example, Hill and Edwards (2019) found students experienced stronger engagement and self-regulation when teacher-led development of students' peer feedback skills for essay writing included knowledge of the purpose, process, and expected results of assessment. Some studies reported mixed or negative student experiences, even though knowledge and even affiliation seemed high (32, 62, 65). In a Hong Kong study of 423 students in three schools, school-based assessment and its associated feedback practices were understood but students felt they were unable to benefit because they regarded their participation as onerous, stressful, or unfair (Tong & Adamson, 2015). Despite these qualifications, the range of studies indicated that students can develop knowledge and affiliation as part of AfL pedagogical practices.

Summary insights—Studies informing Dimension 1 suggest students can be capable AfL participants even though they are not always cognisant of the intention of AfL pedagogies. As students can recognise, respond to, participate in, and even initiate practices without metacognitive knowledge or affiliation, the assembled evidence shows student experience may be more generative if the metacognitive processes of learning are in the minds of both the teacher and the learner.

Dimension 2: affective responses ($n = 50$)

Students have affective responses when teachers facilitate AfL pedagogies. Experience as emotion is influenced by student evaluations of the quality of AfL practices and social

processes. Studies identified positive emotional responses to AfL practices when they ameliorated insecurities related to assessment. However, students were also vulnerable to negative emotional impacts, which could interfere with continuity in learning.

Emotions influenced by student evaluations—Evidence of students' emotional responses to AfL were linked to their evaluation of the effectiveness of the practices. Feedback practices elicited the most evidence (3, 20, 21, 22, 23, 28, 35, 42, 47, 50, 53, 55, 62, 65). Students who give and receive what they regard as useful feedback tend to experience security, satisfaction and happiness; however, where feedback is absent, overwhelming, or perceived as not useful, students report anxiety and dissatisfaction. Kyaruzi et al. (2019) demonstrated this connection in their mixed method study of 570 secondary mathematics students' perceptions of formative assessment, feedback use and performance in Tanzania. When students evaluated the delivery of teacher feedback positively, connected with purposes of improving their learning, they felt supported and secure. Where feedback was perceived as monitoring, like being reprimanded for poor performance, students were anxious.

Emotions are not only a product of feedback quality. Individual experiences were linked to internal conditions like students' existing emotions, and external conditions related to social factors and other pedagogical practices (32, 39, 54, 62, 70). Several studies found a more straightforward correlation between emotions and feedback: students felt happy when they received positive feedback and unhappy when they received negative feedback (8, 18, 23, 25, 26, 37, 43). A Hong Kong study of 26 teachers' feedback on 174 student texts affirmed that students' emotions matter for learning. Lee (2007) described students as stressed, demotivated and confused by negative teacher feedback; they were relaxed and proud when teacher feedback was positive.

Experience as emotion was recorded for AfL practices other than feedback (2, 9, 15, 24, 31, 40, 41, 48, 58, 59, 60, 63). Crichton and McDaid (2016) study of 20 Scottish students revealed positive emotional responses to clear learning goals and shared success criteria. They engendered security and satisfaction: 'It keeps us all right, lets you know you're moving forward... Good to say, well I have achieved that' (p. 197). However, they were also a source of frustration because of the tokenistic way in which they were implemented. Krijgsman et al. (2019) noted the emotional benefits of goal clarification for physical education students in the Netherlands, promoting feelings of relatedness and competence, and allaying the frustration that can result from receiving too much process feedback.

Emotions influenced by social processes and developing learner identity—When students experience themselves as partners with teachers and other learners, they report feelings of confidence and trust (3, 4, 5, 30, 32, 51, 68, 72, 73). A focus-group study of 14 final-year New Zealand students gathered perspectives about the role of feedback in their learning (Plank et al., 2014). Students acknowledged their responsibility to work alongside their teachers when they felt safe, in dialogic classrooms where they could confidently disclose their learning needs and provide point-in-time feedback to their teacher. In a survey of 3680 secondary students in Belgium (Rotsaert et al., 2017), successful peer assessment was shown to be predicted by students' positive experiences of trust in their own and their peers' capabilities and their fear of disapproval and 'friendship marking'.

Developing learner identity through AfL, within the social space of the classroom, has emotional impact (7, 13, 57, 61, 72, 73, 74, 75). In a participative research study of middle-school students and teachers in Queensland, a range of AfL practices were associated with belonging, trust and respect in developing learner autonomy. However, this shaping process is not straightforward. Along with Cowie (2005), Willis (2010, 2011) identified feelings of embarrassment and fear navigated by students and their teachers on the path to developing a more autonomous learner identity.

Summary message—The principles of AfL exhort teachers to 'be sensitive and constructive because any assessment has an emotional impact' (Assessment Reform Group, 2002).

The evidence considered in this dimension presents cooperative, agentic AfL practices as having the potential to make students feel more secure, satisfied and happy in their learning. However, students and their teachers need to negotiate negative emotions including fear, anxiety, frustration and disappointment, which can interrupt continuous learning in the dynamic interactive space of the AfL classroom.

Dimension 3: evaluation of the effectiveness or point of AfL ($n = 62$)

Students experience AfL when they make judgements about what they do and do not value. Students acknowledged the role of AfL in improving dialogic interactions and provided insights about feedback practices and peer- and self-assessment. They responded positively when they were explicitly taught about purposes and process of AfL pedagogies and when school culture and system policy were aligned with classroom practice.

AfL practices improve dialogic interactions—Students who report positive experiences of AfL practices attribute their effectiveness to dialogic interactions, including opportunities to raise suggestions, ask and answer questions, work in groups, and make productive use of rubrics and exemplars (11, 16, 33, 36, 40, 46, 59, 60, 72, 73, 74). In test-dominated China, students appreciated improved interactions with teachers in test follow-up lessons and were willing to adapt future approaches (Xiao, 2017). More productive student and teacher relationships attributed to feedback interactions were identified in nine studies (11, 13, 14, 21, 23, 39, 48, 51, 59). Some interventions achieved this by deliberately altering the contexts and purposes of summative assessments to include student choices in mode and audience (Miedijensky & Tal, 2009; Tay, 2015).

Student evaluations of teacher feedback—Overall, teacher feedback is highly valued by students (17, 20, 24, 28, 35, 59) when it is: clear, detailed, and process-oriented or descriptive (18, 26, 42, 57, 70); delivered in an appropriate mode (32, 37); and accompanied by opportunities to respond (23, 53). However, there is a significant gap between perceived and preferred feedback overall, with student self-efficacy (10, 43, 53), intrinsic values and self-regulation affecting perceptions of feedback quality (van der Kleij, 2019). Four papers provided evidence of how diverse groups evaluated the worth and quality of feedback (10, 33, 48, 60). For example, Carvalho et al. (2014) demonstrated variation by subject and individual characteristics of students. Their quantitative survey of 178 secondary students in Portugal showed girls were both more critical and also experienced greater frequency of positive feedback from their teachers.

Challenges for peer- and self-assessment—Students experienced peer-assessment as a source of help and inspiration (3, 9, 13, 14, 17, 54, 64, 67). An experimental study of senior vocational students in the Netherlands (Van Gennip et al., 2010) illuminated some mechanisms for success. Results showed peer feedback encouraged unanimity of goals and improved psychological safety. The benefits of self-assessment, at least as it is currently practised (Burner, 2016), were less clear to students (6, 8, 9, 17, 24), with facilitation practices and a lack of mutual understanding between students and teachers being significant barriers to positive student evaluations.

Two studies identified trust in their own capacity and the capacity and intentions of their peers as necessary to make peer- and self-assessment seem like worthwhile undertakings (35, 50). In a New Zealand case study, lack of trust in peers and over-reliance on teachers was linked with teachers taking a narrow view of scientific inquiry and providing limited opportunities for divergent responses (Hume & Coll, 2009). Intervention studies where students were provided with tools to support peer- and self-assessment (6, 47, 65) produced mixed results. Results suggest social processes and interpersonal variables are most important to student experience and 'there is a long journey ahead to persuade students that feedback can come legitimately from themselves and their peers' (Harris et al., 2014, p. 127).

Challenges and opportunities for AfL practice—Two factors seem to interfere with students appreciating the contribution of AfL pedagogies to their learning. First, student experience is affected by the quality of teacher facilitation (8, 9, 15, 34, 44, 45, 49, 52, 71), producing equivocal evaluations from students (58, 62, 63, 65). An action research study in Sweden of 54 junior secondary students (Torkildsen & Erickson, 2016) included students in data production and analysis of conceptions of assessment in their classroom. Goal clarification was seen as desirable but inconsistently communicated and feedback, though valued, was not always perceived as being well done. Second, students sometimes valued more traditional, teacher-dominated approaches. This was attributed to vague awareness of the benefits of formative assessment (Vogt et al., 2020), struggling with moving away from grades (Slavit & deVincenzi, 2019), or not valuing school-based assessment (Tong & Adamson, 2015).

Despite challenges, research indicates students can change their position on AfL practices. Congruent messages amongst teachers and leaders, and including students in discussions about assessment, were factors (4, 5, 6, 29, 38). Indeed, students were 'more influenced by the discourse around assessment compared to the teachers' (Jónsson et al., 2018, p. 56). Intervention studies indicate that explicit support for students to value AfL practices can also improve student perception (17, 30, 75). Hill and Edwards' (2019) partnership model for essay writing and Yin and Buck's (2015) integration of formative assessment in high school chemistry found students, when provided with a rationale and ongoing support for AfL practices, recognised and valued improvements in their self-regulatory skills. In a large survey and portfolio-based interview study, Canadian K-12 researchers cited instances of students being more independent in developing success criteria and being supported to appreciate the value of peer feedback as providing 'something to aim for' (DeLuca et al., 2018, p. 89) as linked to positive perspectives. A key conclusion was that 'using AfL approaches is a learned behaviour; students need to be explicitly taught about AfL concepts, terminology, and use over time' (p. 91).

Summary message—The practical effects of AfL implementation are not necessarily 'genuinely or equally educative' (Dewey, 1938/1986), and students in these studies offered important insights about the conditions that influence their evaluations of the worth or point of AfL practices. Findings suggest schools should focus on formal policy and culture underpinning the role of AfL in learning, combined with teacher practice with explicit teaching about how AfL can promote learning.

Dimension 4: awareness of agency ($n = 47$)

Students experience AfL as agents when they are aware of being 'actors who make choices, and whose actions shape assessment practices in both anticipated and unexpected ways' (Adie et al., 2018, p. 2). Students are aware of their lack of agency, responsive to invitations to take a more central role, and unpredictable in their exercise of agency.

"You just get told and that's it" (Crichton & McDaid, 2016, p. 197)—Studies frequently represent students as being aware of *not* having power in the classroom (6, 8, 9, 15, 38, 34, 39, 29); for example, by externally imposed criteria (Bourke, 2016) and teachers imposing correct answers (Xiao, 2017). Further, students typically rated their agency lower than their teacher (Jónsson et al., 2018), although sometimes there was agreement on AfL aspects that were problematic. Havnes et al. (2012) studied feedback practices in six Norwegian schools, comparing student and teacher responses via surveys, interviews and focus groups in senior secondary schools with an AfL approach. Students and teachers agreed more needs to be done to include students in planning, setting criteria and discussing strategies for problem solving. A Swedish study (Hirsh, 2020) showed senior secondary students as alienated by formative assessment. Far from being empowered by these practices, students

were overwhelmed by responsibility and less than ever able to see themselves as agents in the classroom.

Student awareness of agency is malleable—Opportunities for students to make choices about their learning increased students' awareness of agency (16, 35, 51, 57, 59, 64). Hume and Coll's (2009) case studies in two senior secondary science classes linked students' conscious decisions to initiate and sustain cognitive engagement with embracing the 'spirit'—not just the 'letter'—of AfL (Marshall & Drummond, 2006). Tay (2015) compared the impact of AfL associated with either traditional testing or a live online forum on students' self-regulated learning, an important corollary of student agency. Students acknowledged that choice improved their engagement, they derived criteria from the context or prior learning, and they could draw on feedback comments when constructing responses.

AfL further encouraged students to perceive a more equal assessment relationship when interventions invited students to be active and intentional participants (5, 6, 7, 13, 14, 21, 72, 30, 32, 46, 48, 51, 61, 72, 73). Deliberately casting students in the role of discipline experts increased autonomy (Cowie & Moreland, 2015; Willis, 2010), as did formalised processes of reflection and goal setting beyond the 'controlling' practices of teachers communicating pre-determined learning intentions and success criteria (Bourke, 2016; Bourke & Mentis, 2013; Plank et al., 2014; Willis, 2010). Co-constructing learning goals and success criteria, and associated practices like student-generated feedback (Hill & Edwards, 2019) offered potential for improving students' experience of agency (17, 41, 57). One study in 14 Irish schools (MacPhail & Halbert, 2010) introduced a planning framework for using AfL instruments, including the 'self-assessment wheel' in HPE. Results indicated an increased awareness of agency; they talked about what they wanted to learn, and they were aware of directing and assessing their learning.

Difficulties with student agency—When students make choices about when and how to act, their exercise of agency does not always align with teacher intent (13, 17, 23, 25, 27, 29, 30, 42, 50, 55, 61, 62, 65, 66). This finding is exemplified by Goh and Walker (2018), who found students deliberately avoided some aspects of feedback, based on their disagreement with it or unwillingness to reflect on more challenging items. Gamlem and Smith (2013), using data from student interviews and lesson observations, identified the kind of feedback they say is most often reported by students; that is, related to compliance or completion but unrelated to the quality of the work. Students experience this type of feedback as awareness of the teacher controlling achievement or effort. Even when an intervention was designed to promote self-regulation, students responded in variable ways. In a recent Australian study piloting the use of a feedback enhancement tool (van der Kleij, 2020), a significant number of students used it in ways other than intended because they 'forgot', did not see the purpose, or found it tedious. The findings highlighted variability amongst students in their ability and willingness to engage with more challenging aspects of AfL practice, like interpreting feedback, reflection and planning for future action.

Summary message—AfL is at heart a disruptive pedagogy. It aims to shift the traditional power dynamic from teacher-centred to shared with students. It follows that a practical effect of AfL pedagogical practice would be students' awareness of having choice and voice in classroom assessment practices. The papers in this collection show student experience as characterised by an awareness of not having agency and offer possibilities for empowering students.

Dimension 5: active and interactive responses ($n = 62$)

In AfL, students' active and interactive responses that enhance ongoing learning occur within everyday practices as students seek, reflect upon and respond to information (ARG, 2002).

Findings in Dimension 5 explain how AfL processes support students to monitor and evaluate their learning. Studies also point to some barriers and opportunities for generative experiences of learning.

Student actions as seeking information—Relatively few studies provided evidence of students seeking information about their progress. When it happened, evidence-seeking was most strongly connected with students developing and used their own success criteria (7, 29, 30, 14, 56, 64). In Greece, 36 early secondary students defined and using their own assessment criteria with little guidance and no prior experience (Tsivitanidou et al., 2011). The finding of this small study—that students are willing and capable seekers of evidence—is supported for students in vocational education (Havnes et al., 2012) and students with disability in inclusive general education classes (Shogren et al., 2020). Evidence-seeking also involved students in initiating feedback, recording progress, and setting learning targets (1, 39, 46, 48, 59, 65, 72, 73), although personal and environmental factors were noted as constraints. In four case studies of verbal feedback quality (Kerr, 2017) students' information-seeking behaviours were enabled and constrained by: peers' and teachers' expectations of their cognitive ability; their own emotions and their perception of their teachers' emotions; and the degree of formality. These papers highlight the conditions under which AfL can support students towards higher levels of autonomy.

Student actions as interpreting information—Studies that identified students interpreting information (1, 7, 13, 16, 17, 24, 25, 28, 35, 36, 48, 56, 61, 65, 70, 72, 73) provided evidence of how the affordances of metacognitive behaviour can be realised as self-regulation. A survey of 1137 lower secondary students in Norway about their perceptions of teachers' feedback practice in English indicated active and equal participation in setting learning goals and success criteria were significant for self-regulation and self-efficacy (Vattøy & Smith, 2019). Cowie and Moreland (2015) linked students' intention to act with their use of success criteria, where the immediate context of formative classwork led to thinking ahead about the overarching summative task. A large qualitative study (Hung & Hoi, 2010) in Hong Kong explained students' experiences of interpreting information as dependent on how rubrics were used. For example, rubrics as 'study guides' were productive for connecting assessment criteria with the motivation to improve, and guidance in using rubrics for self- and peer-assessment supported students to engage in internal dialogue on their way to developing their ability to evaluate their own and others' performance.

Student actions as using information was the most frequently recorded practical effect of AfL. Students used (or did not use) feedback to improve their work (5, 7, 14, 17, 20, 26, 42, 48, 51, 55, 62, 70). In Germany, an experimental study of 146 ninth graders connected the perceived usefulness of process-oriented feedback in mathematics with students' active participation in moving their learning forward (Harks et al., 2014). The authors describe 'the perception of feedback's usefulness results first in a feeling of competence and, hence, a positive change in interest, and second enables the actual use of feedback information for correcting erroneous knowledge components' (Harks et al., 2014, p. 282). Despite such generative instances, student use of feedback was often limited to making 'surface' changes like straightforward error-correction (Saliu-Abdulahy & Hellekjær, 2020). Eleven studies showed students using information elicited in AfL practices to set goals and intentions beyond the immediate task (3, 15, 25, 30, 35, 36, 47, 51, 65, 74, 75). Senior students used learning intentions and success criteria as a guide to exam revision (Crichton & McDaid, 2016) or, having understood a task, continued to make improvements and changes to work even following positive feedback (Goh & Walker, 2018).

Student experience as interactive—Thirty-one papers documented student interactions in AfL pedagogical practices (1, 2, 10, 11, 12, 13, 14, 16, 17, 20, 23, 30, 33, 36, 37, 38, 39, 40, 46, 47, 51, 52, 57, 59, 60, 61, 64, 69, 72, 73, 74). AfL culture was associated with 'an exchange of communication on two sides' (Irawan & Salija, 2017, p. 150) because students

were encouraged to ask and answer questions (Hott & Brigham, 2018; Jónsson et al., 2018; Tay & Kee, 2019; Xiao, 2017), disclose difficulties (Plank et al., 2014; Xiao, 2017) and participate in feedback conversations (Kerr, 2017). Peer assessment also offered opportunities for interaction (Crossouard, 2009; Gamlem & Smith, 2013; MacPhail & Halbert, 2010; Willis, 2010, 2011). In a single-class study in Slovenia (Sicherl Kafol et al., 2017), peer assessment changed student perceptions of assessment. In this research, the teacher's role was to be facilitator of dialogue, not only in relation to the content but also students' learning approaches, metacognition and self-assessment processes. This paper summarises a key insight: AfL's dialogic approach can support students to become more active participants capable of taking responsibility for their own learning.

Where student actions and interactions are mis-educative—The varying quality of teachers' practice in facilitating AfL interactions was a significant theme (8, 9, 12, 17, 22, 29, 43, 55, 63, 69, 74). Typically, teachers overestimated how active students were in dialogic processes (Jónsson et al., 2018; van der Kleij, 2019). Although some studies identified feedback loops between students and teachers, 'quality' loops that expand and extend students' learning over time were few (Gamlem & Munthe, 2014; Peterson & Irving, 2008; Vattøy & Gamlem, 2019). This is explained by: students having limited time for using feedback (Burner, 2016; Xiao, 2017); failing to understand feedback (Lee, 2007); or teachers' over-taking interactions, like goal-setting for students, thus diffusing the intended effect of the practice (Charteris & Smardon, 2018). An action research study over four years of 54 year 7–9 students in Sweden examined how students accessed assessment practices to improve their performance (Torkildsen & Erickson, 2016). The authors concluded that student voice and preconditions, including clarified goals and success criteria and time for responding to feedback, need to be considered in the facilitation of AfL practices.

Summary message—AfL contributes to students being more active, more help-seeking and self-evaluative, and more likely to be explicit about what they do and do not understand (Birenbaum, 2016; Cowie, 2012; Gamlem, 2015). These actions and interactions were also apparent for students with additional learning needs (Bourke & Mentis, 2013; Hott & Brigham, 2018). However, the view of student experience provided here also indicates students need sufficient skill, time and support for action and interactions that allow for 'that continuous readjustment which is essential to growth' (Dewey, 1914/2004, p. 475).

Dimension 6: interactions beyond the immediate context ($n = 14$)

Student experience as connected with 'other things' students know and can do, the relevance of classwork to other subjects, or conversations and learning that happen at home, featured in few papers. Themes include the relevance of connectedness for shifting power dynamics in AfL classrooms and for understanding the import of social-environmental conditions.

Connectedness as catalyst for shifting classroom power dynamics—In eight studies, students and teachers made meaningful connections with the world beyond school (6, 7, 13, 14, 27, 70, 72, 73). A phenomenological study (Bourke, 2016) showed the controlling function of assessment mediated by support for learners to self-assess. Bourke showed that, through AfL, learner identity is cultivated by making use of out-of-school interests, competence and experiences, a conclusion supported by other studies in this group (Cowie, 2005; Vattøy & Smith, 2019; Willis, 2010, 2011). Discussing class work with friends and family, and bringing visitors into the classroom with 'home' experiences (Cowie & Moreland, 2015), also provided encouragement for students. Some students prioritised their own knowledge and resources in assessment processes because they wanted 'to think for yourself because you have to be independent when you grow up' (Harris et al., 2018, p. 135). Though certainly an example of shifting the locus of power, the authors of this paper posited counter-productive

assessment behaviour, if students with a strong beyond-school orientation to learning did not remain open to feedback. Together, these findings are a reminder that pedagogy is not only something teachers do; interactions beyond school also have pedagogical power to move learning forward.

Personal experiences and cultural values affect continuity in learning—Cultural values and personal experiences were relevant when teachers attempted to renegotiate learner identity to make room for agency (25, 34, 50, 72, 73). This effect was quite specific for ethnic minority Chinese students in Hong Kong, where classroom environments in their home country were characterised by teacher-dominated assessment practices and this remained their preferred way of working despite their teacher adopting AfL practices (Hue et al., 2015). Peterson and Irving (2008) referred to parents' expectations as relevant to potential interactions beyond school. Parents from the lowest decile school in the five New Zealand schools were interested in feedback on their children's progress; however, their own school experiences were a significant barrier to their active involvement. Willis (2011) described 'value conflicts' as connected with individual identity when students were being positioned by teachers as 'knowledge creators', like when a teacher's expectation that an autonomous learner in science is someone who takes risks conflicts with gendered expectations for girls.

More immediate impacts of beyond-school life were discernible. Emotions imported from outside the classroom affected how feedback was experienced by students, with negative emotions blocking the receipt of teacher feedback (Kerr, 2017). Vattøy and Gamlem (2019) found their teacher participant who had a high regard for adolescent perspective was able to elicit information that a student was distracted by negative feelings about a chore he had failed to complete at home. Such attention was an opportunity to build mutual trust and respect and eased the process of teacher redirection. Conversely, students' perception of teacher emotions impacted negatively on student experiences of AfL, with students' past classroom experiences making them vigilant in avoiding dialogue with teachers who appeared stressed (Kerr, 2017; Willis, 2010).

Summary message—Not every interaction relevant to moving learning forward can be expected to occur inside the classroom. Connectedness beyond the immediate classroom context to student experiences of AfL inside the classroom is affected by past and immediate student experience beyond the classroom, and the relevance of broader cultural values.

DISCUSSION

This scoping review investigated how students experience AfL pedagogies. There have been more studies recently that represent student experience of AfL collected from students via surveys, focus groups and interviews. However, studies were concentrated by location (refer Table 5) where AfL is systemic policy, like New Zealand and Norway. This was the case, even though the studies were selected based on practices recognisable as AfL; AfL did not need to be the declared pedagogical approach. Also, relatively few studies were discipline-specific (refer Figure 2). The greatest weight of evidence was for feedback practices, a point acknowledged here in the thematic organisation of results. The least information was available about student experiences of shared learning goals and success criteria.

Three dominant and consistent themes emerged. These are discussed in the following sections. A significant additional insight is a corollary of the arrangement of results in this paper: just as each practice in AfL is connected in iterative cycles, so too are the proposed dimensions of student experience (refer Table 4). For example, when students appreciated the worth or quality of teacher practice (Dimension 3), they experienced greater agency (Dimension 4), produced more productive emotional responses (Dimension 2) and were more willing to act and interact with teachers and peers (Dimension 5). These actions and

interactions developed stronger knowledge and affiliation with AfL practices (Dimension 1) which in turn improved student experience as evaluation. Together, these understandings suggest possibilities for teacher practice, theoretical development, and research about how to place students at the centre of understandings of classroom practice and enable 'all students to achieve their best and to have their achievements recognised' (Assessment Reform Group, 2002, my emphasis).

Student experience of AfL is responsive

First, student experience is responsive to changes in teacher practice focused on increasing students' knowledge and affiliation and positioning students as developing disciplinary experts. Students recognise strategies like questioning and feedback as everyday or routine classroom practice (Hott & Brigham, 2018; Kyaruzi et al., 2019). Further, associated practices, including communicating clear learning intentions and sharing or co-constructing success criteria, and making use of these in peer- and self-assessment practices, are readily accepted by students. Improving teacher facilitation via interventions, such as supporting teachers to develop students' feedback practices (Hill & Edwards, 2019) show improvements in engagement and self-regulation. This finding is useful for educators because, in AfL, peer- and self-assessment are critical for students to develop a shared understanding of learning goals and the criteria for success. Such malleability, notable in each dimension, indicates ongoing potential for AfL to contribute to generative experiences of learning.

One difficulty is that the benefits of AfL practices seem harder to sustain in the world beyond research interventions. Studies in New Zealand (Harris et al., 2014), Iceland (Jónsson et al., 2018), Norway (Burner, 2016), Sweden (Hirsh, 2020), and Hong Kong (Lee, 2007) show that even students in strong AfL policy contexts experience (and sometimes prefer) AfL as teacher-centred practice. Another difficulty is that students do not always respond in expected ways. As studies including Harris et al. (2018) show, students are not always willing to act in growth-oriented ways when new interactive assessment possibilities are presented to them.

These caveats notwithstanding, results indicate interventions that affect the quality of student experience by building metacognitive knowledge about and affiliation with classroom assessment processes, are worthwhile and achievable undertakings. Whether by explicit development of a common language for feedback purposes and practices (Charteris, 2015), an approach employed by 20 other studies in this collection, or by developing strategy recognition through explicit skills development, such as in McLaren (2012), affiliation and metacognition involved training in how to participate productively. Knowledge and affiliation were also closely connected with other dimensions of student experience. Findings across a range of contexts and study designs showed that a positive student evaluation of the worth or value of a practice is a precondition for productive student experience because it: secures affiliation; is associated with positive emotional responses conducive to learning; and encourages risk-taking within and interaction beyond the classroom. As such, systemic policy and school leadership would do well to acknowledge that 'students need to be explicitly taught AfL concepts, terminology and use over time' (DeLuca et al., 2018, p. 91) as they learn to seek, interpret and use information in dialogue with their teachers, themselves and each other.

Another feature of AfL interventions is that they intentionally developed learner identity so that students come to regard themselves as developing disciplinary experts. Particularly powerful to the endeavour of apprenticing students into disciplinary norms were practices associated with developing and using success criteria. In six studies, this was a significant factor, exemplified where students worked collaboratively, co-constructing the criteria

for success and thereby building autonomy, including the ability to independently evaluate evidence of their learning (Cowie & Moreland, 2015; Willis, 2010). By focusing on the combination of disciplinary norms and formative assessment practices like co-constructing success criteria and self/group assessment, research illustrated authority for knowledge and feedback could be distributed so that 'students experience learning as the development of autonomy and discernment' (Cowie & Moreland, 2015, p. 247). The benefit of this approach to practise facilitation was clear in terms of student awareness of agency and appreciation of the purposes of assessment-related practices (MacPhail & Halbert, 2010; Sicherl Kafol et al., 2017). A related productive possibility suggested by evidence in Dimension 6 could be to make more use of connectedness with the world beyond school. More work is needed to explore how students can make use of experts other than their teachers and connect their out-of-school learning capabilities with in-school learning processes in ways that inform their development as experts and evaluators.

Student AfL experience is relational

Evidence in the selected studies demonstrates a strong consistency between the practical effects of AfL and a pragmatic view of student experience as interactive and continuous through relationships, if it is to move learning forward in educative ways. The theme of enhanced dialogic interactions was connected with findings that demonstrated when AfL contributes to student agency. For example, studies showed how feedback quality improves student-teacher relations (Gamlem, 2015) and how the suite of AfL practices supports students as they seek and provide evidence of their learning, as well as make use of rubrics and exemplars (Hung & Hoi, 2010; Krijgsman et al., 2020; MacPhail & Halbert, 2010). Such opportunities for productive interaction were enhanced when novel and authentic possibilities were introduced (Miedijensky & Tal, 2009; Tay, 2015). This causal relationship, where AfL enhances and in turn is enhanced by social processes, explains how teachers might create expectations amongst students so they can: take responsibility for communicating with teachers; build assessment relationships with others (including others beyond school); and set and monitor their own learning goals.

Where experience is relational, it is also emotional. Although students do experience more interaction when their teachers facilitate AfL, and this causes more autonomous and creative learning, it must be recognised that classroom interactions are complex and often sensitive. Negative emotions, like fear and frustration (Cowie & Moreland, 2015; Willis, 2010, 2011), represent significant barriers to students as they build their evaluative expertise. This can be exacerbated where differences between school and home cultures, and emotions arising from events that happen outside the classroom, hinder students' participation in productive interactive pedagogical practices. Addressing these exigencies requires an awareness of the impact of internal and external conditions on student experience as emotion. Such awareness may open opportunities for shared responsibility for building classroom climate conducive to generative interactions—for students and teachers to co-regulate social relations as they make use of 'affordances and opportunities for students to manage their own learning, with and without others' (Andrade & Brookhart, 2020, p. 350).

Diverse experiences are under-represented but students with difference and disability are capable

It was reasonable to suppose that research in this collection would reflect AfL's principled commitment to recognising and enhancing opportunities for all learners; however, the

experiences of diverse student groups were largely absent. What evidence has been gathered is compelling and potentially useful. Practice response systems increased interactions for students with emotional and behavioural difficulties (Hott & Brigham, 2018). Precise and direct questions, with affirmative feedback, reduced negative emotions and increased interactions for students with Autistic Spectrum Disorder (Tay & Kee, 2019). Students received and responded to feedback differently, depending on their gender (Carvalho et al., 2014), as did students with stronger and weaker previous academic performance (Pat-El et al., 2015). Importantly, students with disability were shown as capable of the highest levels of meta-cognitive practice when they were invited to self-reflect (Bourke & Mentis, 2014) and set and monitor learning goals (Shogren et al., 2020). However, there are so few studies that consider what barriers and enablers exist for diverse student groups that it is difficult to draw conclusions—except the clearly evident one that more needs to be known.

Contribution and implications for research, policy and practice

This scoping review proposed the research question: *How do students experience AfL pedagogies?* A synthesis of 75 studies demonstrated that secondary schools across countries and disciplines continue to make use of AfL. However, a more comprehensive understanding of how students experience AfL pedagogies is needed. Applying pragmatic philosophy to define experience shifts attention from inputs of major AfL practices towards a closer consideration of the practical effects on continuity of learning. The decision to view student experience as multidimensional further contributes a comprehensive analytic frame to enable insights to be drawn from a disparate evidence base and promote ongoing research that focuses on students' experiences of AfL.

Future research could investigate what enhances interaction and establishes students as partners with their teachers in classroom assessment processes. Projects could usefully be connected with: including students in planning decisions; illuminating and co-constructing success criteria (Brooks et al., 2021); student evaluations of peer- and self-assessment practices; mobilising teacher pedagogical content knowledge (Cowie, 2012; Schildkamp et al., 2019); enhancing clarity of AfL purpose and processes; and providing sufficient time for students to participate in AfL pedagogies.

The results also indicate a need for pedagogical interventions and policy developments that prioritise students' identity as developing disciplinary experts who can evaluate their own performance. Science, English as a foreign language, and physical education feature in discipline-specific studies. There are very few in the arts or technical courses, and surprisingly few in English, mathematics or humanities classes. Nonetheless, the spread of countries indicates that AfL is a feature in secondary classrooms across the globe. Although surprisingly few were situated in the United Kingdom, Scandinavian countries and New Zealand predominated. In Norway, an exemplary study in physical education described what students did that counted as AfL practice. A significant finding was that 'teachers do not need to involve students in assessment, they are already involved. What teachers need to do is to utilize more reflective feedback in order to engage and guide students into utilising more reflective assessment processes' (Aarskog, 2020, p. 11). Another Scandinavian paper investigated whether AfL in physical education could potentially be 'adapted to the different needs and circumstances of students in heterogeneous groups' (Tolgfors, 2019, p. 1214). Teachers successfully exploited flexible syllabus requirements, adjusting assessment techniques to meet the needs of individual learners and provided appropriate divergent feedback (Torrance & Pryor, 2001). Tolgfors's study demonstrates the potential for AfL practices to support individual learners, though such an endeavour will demand teachers' critical engagement with dominant assessment practices. Further studies could describe other

discipline-specific expectations and practices for AfL and identify curriculum connections to support student agency. Understanding how evaluation works in various subjects will help identify ways secondary teachers can use their disciplinary knowledge and cast students in the role of developing discipline experts.

Fragmented, inexperienced teacher facilitation remains a focus for improvement. Other barriers to address are related to student attitudes. Though positive experiences predominate in AfL, continuous learning is interrupted by unhelpful negative emotional experiences and when students do not value AfL practices. A corollary is that students, and their teachers, may be unwilling to engage with challenging aspects of AfL and retreat to more traditional, teacher-dominated approaches. This circumstance can explain the enduring difficulty of moving beyond a compliance culture in AfL implementation and towards AfL as disruptive pedagogy with the potential to promote students as agentic learners with the self-regulatory skills to move learning forward with their peers and their teachers.

A final contribution of this review is to highlight that AfL research does not appear to be fulfilling its principled commitment to diversity and inclusion. Almost all the studies were of homogeneous student groups, a circumstance evident in the predominance of multi-subject studies (38 of 75) and the near-absence of studies of students with diverse learning needs. Indeed, only one paper (Tay & Kee, 2019) investigated the experiences of students with identified learning needs, in this case students with autism, of AfL practices in mainstream secondary classrooms. Further research is needed about the diversity of student AfL responses, the different effects of cultural contexts, and students who experience disability in mainstream classrooms. After all, '[i]f AfL is premised on learner-centredness, surely it cannot be "one-size-fits-all" in an inclusive classroom where there is a diversity of learner needs' (Tay & Kee, 2019).

Limitations

This review provides a perspective about student experience and a useful overview of insights from the literature; however, 'scoping reviews have inherent limitations because the focus is to provide breadth rather than depth of information in a particular topic' (Tricco et al., p. 9). Despite conducting an extensive literature search, it is possible that some relevant literature was not retrieved. Equally, in taking a wide approach focused on practices individually or severally, findings reflect a research base inclusive of studies not explicitly or theoretically aligned with AfL. Further, the focus on secondary schools runs the risk of ignoring important and relevant studies from primary and tertiary contexts. This issue of simultaneously having too much and not enough information has implications for the final list of included papers. Thus, the findings of this review require careful consideration of context and approach for application.

CONCLUSION

AfL prioritises the central, agentic role of the student. Yet researchers identify that student experience of AfL is under-researched. To address the problem, this scoping review endeavoured to discover what is known in the field about how students experience AfL pedagogies. Six dimensions of student experience, determined through an iterative analytic process, enabled a simple collection of strategies to be conceptualised as a complex suite of practices dependent on students' metacognitive awareness of the purposes and processes of learning, positive attitudes to AfL practices, and willingness and capacity to make the most of active and interactive opportunities within and beyond the immediate

learning environment of the classroom. Further, knowing which students have had their experiences included in AfL research reveals important gaps for realising success for *all* students. As AfL pedagogies continue to be used in schools and promoted in school systems, this scoping review maps the field's knowledge base in student experience over the last 20 years and sets up a future research agenda to re-place students at the centre of AfL research and practice.

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There are no conflicts of interest.

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DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

ORCID

Julie Arnold  <https://orcid.org/0000-0002-1919-5376>

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