KEN091052

How engaged are they? An inductive analysis of country student views of their engagement in classroom learning

Penelope Kennish (BA Hons) and Rob Cavanagh (PhD)
Curtin University of Technology, Perth, Western Australia

Paper submitted to the 2009 Annual Conference of the Australian Association for Research in Education: Canberra.

Abstract
This paper reports on a qualitative study within an investigation of secondary school student engagement in classroom learning. The empirical investigation was informed by a theoretical model in which student engagement in classroom learning was viewed as a function of student capability for learning and the expectations placed on their learning. This study was part of the second phase in a large scale ARC Linkage project. The first phase focused on epistemological issues in defining student engagement in classroom learning. The second phase used interviews to collect qualitative and quantitative data from a representative sample of Western Australian secondary school students. The third phase currently underway is applying a self-report rating scale instrument to collect data from a large number of students to enable analysis of interactions between engagement variables.

In Phase Two, an interview schedule was developed using operational definitions of constructs identified in Phase One. The instrument was administered by two researchers to collect 104 secondary country students’ views on eleven aspects of their engagement in classroom learning. In the context of a particular subject class, they were asked about their self-esteem, self-concept, resilience, self-regulation and self-efficacy. They were then asked about six aspects of the expectations of their learning - can explain; can interpret; can apply; has perspective; can empathise; and has self-knowledge. Although the questions were semi-structured, the students provided much rich information on themselves and their engagement.

Data were analysed using an iterative process in which it were scanned, categories were generated, and associations between categories were identified. The eventual classification schema comprised three levels. The first level had three categories, the second had eleven categories and the third had 27 categories. Percentages of student comments for the respective categories were calculated to show common and relatively uncommon examples of engagement. Additionally, the meaning of the categories was explained using examples of student comments. The most prevalent constructs emerging from the analyses were: student relationships with classmates and the teacher; an orientation towards learning individually, with peers and from teacher instruction; and confidence in own ability and own perseverance. The students also reported disruptive influences from peers, teacher alienation and reservations and anxiety about their learning.
In conclusion, the study has provided an alternative view of country student engagement in classroom learning but one which is consistent with extant literature on the phenomenon.

Address correspondence to:
Associate Professor Rob Cavanagh,
School of Education,
Curtin University of Technology
GPO Box U1987
Western Australia 6845
Email: R.Cavanagh@curtin.edu.au
Phone: +61 8 9266 2162
Fax: +61 8 9266 2547

The research was conducted as part of an Australian Research Council funded Linkage Project between Curtin University of Technology and the Participation Directorate of the Western Australian Department of Education and Training.
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Introduction
This paper commences by describing how student engagement in classroom learning was conceptualized. The key elements in this conception were subsequently used to construct an interview schedule. Next, the characteristics of the sample of students interviewed are presented and then the data collection procedures are explained. The application of an inductive data analysis technique to these data is explicated. The empirical results are discussed in consideration of the extant literature on student engagement. Finally, the importance of the study is summarised and some recommendations for future research are made.

Background
When people described optimal experiences (situations which are highly enjoyable), they often use the term *flow* (Csikszentmihalyi, 1990). The experience of *flow* was described as a balance between perceived high levels of challenge and high levels of skill (Massimini, Csikszentmihalyi and Carli, 1987). Shernoff, Csikszentmihalyi, Schneider and Shernoff (2003) defined engagement as high concentration, interest and enjoyment. With regard to classroom engagement, this was maximised when perceived challenges and skills were high and in balance (Shernoff, 2001). This view of classroom engagement was adapted by Cavanagh, Kennish, and Sturgess (2008) who defined engagement in classroom learning as a function of student capability for learning and the expectations of the student’s learning (see Cavanagh, Kennish, and Sturgess, 2008).

Student capability for learning was operationally defined by applying Martin’s tripartite taxonomy of selfhood – the *expressive self* (self esteem and self-concept), the *managerial self* (mostly evident in studies of self-regulation and self-efficacy) and the *communal self* (“…situated learning, social cognition, learning communities, sociocultural psychology, hermeneutics, pragmatism, and critical theory” [Martin, 2007, p. 80]). The *expressive self* and the *managerial self* were proposed as elements of student capability for learning. Resilience which is commonly referred to in the engagement literature was subsequently added as a third element in the *managerial self* classification (see Cavanagh, Kennish, and Sturgess, 2008).
A curriculum framework with components focused on learning for understanding (Wiggins and McTighe, 1998) was used to define expectations of student learning. This comprised six facets - explanation, interpretation, application, perspective, empathy, and self-knowledge (see Cavanagh, Kennish, and Sturgess, 2008).

The five elements of student capability for learning and the six facets of expectations of student learning were investigated in a study of Western Australian secondary school students. The students were asked how characteristic the eleven engagement sub-constructs were of themselves and their learning. This paper reports on one interpretation of the interview data.

**Research objectives**

The aim of this exercise was to conduct an inductive analysis of interview data on student views of various aspects of their engagement in classroom learning. Specifically:

- What key aspects are exemplified by the data? and
- How do the student’s describe these key aspects?

**Procedure**

The sample was 104 secondary school students from country schools in Western Australia (outside the Perth area). A stratified sample was chosen to include children with diverse backgrounds. The sample characteristics are presented in Table 1 below.

<table>
<thead>
<tr>
<th>Table 1. Sample characteristics</th>
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<tbody>
<tr>
<td><strong>Student variables</strong></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Females</td>
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<tr>
<td>Males</td>
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<tr>
<td><strong>Year of schooling</strong></td>
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<tr>
<td>Yr 8</td>
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<td>Yr 10</td>
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<td>Yr 11</td>
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<td>Yr 12</td>
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<tr>
<td><strong>Subject reported</strong></td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Maths</td>
</tr>
<tr>
<td>S&amp;E</td>
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<tr>
<td>Science</td>
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<tr>
<td><strong>Total sample</strong></td>
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</tbody>
</table>
The interviews commenced with the researchers introducing themselves and the purposes of the study. The prompts for these introductions were:

- Who we are - DET and CURTIN;
- What this stage of the research is about, looking at student engagement in the classroom;
- Who will be participating in the research? – 200 other students around the state; and
- When and where the findings will be published. – Eventually a PhD.

These were followed by some ‘warm up’ questions that also elicited background data on each student. These were:

- What year are you in? What do you want to do when you leave school? Why is that?
- What about your schooling? Do you enjoy school or not? Why? Why not?
- What lessons or aspects of school do you like the most? Like least? Why?
- What is it about them that you enjoy?

These data were recorded on the summary sheet which was annotated during and after each interview:

<table>
<thead>
<tr>
<th>Date of Interview:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Name:</td>
</tr>
<tr>
<td>Student Code:</td>
</tr>
<tr>
<td>Gender:</td>
</tr>
<tr>
<td>School:</td>
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<tr>
<td>Year Group:</td>
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<tr>
<td>Subject Area:</td>
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<tr>
<td>English as a Second Language</td>
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<tr>
<td>Aboriginality</td>
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<tr>
<td>NEET</td>
</tr>
</tbody>
</table>

The students were then asked questions about aspects of themselves which related to their learning. The interview questions were:

- How good do you feel about yourself and what you can do in <this class>? Can you give us some examples of this?

- How do you see yourself in comparison to other students in <this class>? Is the class streamed or in levels? Where are you placed in the class? Do you think about it? Does it make you feel good? Can you give us some examples of this?
• How do you cope, manage or get on when problems arise in <this class>? When things go wrong? When you don’t get the results you want? Can you give us some examples of this?

• Do you think you are in charge (control) of your own learning in this class? This may include discipline and behaviour. Do you use techniques to learn (take notes, review notes after class, etc) Can you give us some examples of this? Do you look after your learning or is the teacher in charge?

• How much effort will you make and continue making to be successful in this class? Can you give us some examples of this?

They were also asked about the expectations of their learning. The interview questions were:

• Are you expected to talk or write about what you have learnt? This could be discussions or essays or assignments. To what extent, do you add your own words? Can you give us some examples of this?

• Is it expected that you will extend or add to what you have been taught? Do they expect you to build on the basics you are given in class? Or do you write down what’s on the board only? Can you give us some examples of this?

• Are you expected to use what you have learnt? For example, to solve new problems or fix something. This may be in the class or in other classes or elsewhere in your life. Can you give us some examples of this?

• Are you expected to know what others believe in or value? Do you look at things from others points of view? This could be in class with the other students in discussions, or it could be in the topic you are learning. Can you give us some examples of this?

• Are you expected to adapt your own views or ways of doing things to fit in with others? This could be in teamwork. Can you give us some examples of this?

• Are you expected to show that you are aware of your own strengths and weaknesses? Do you know what your strengths and weaknesses are, and is that something you are expected to know? Can you give us some examples of this?

Each interview was conducted by two researchers and digitally recorded. At the conclusion of the interviews the data available for analysis were the audio recordings. This study is an analysis of the transcripts of the audio recordings.
The data were analysed using an inductive process – a form of analytic induction (LeCompte and Preissle, 1993). “The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant or significant themes inherent in raw data, without the restraints imposed by structured methodologies” (Thomas, 2006, p. 2). While the interview questions were semi-structured and based on eleven sub-constructs, this conceptualisation of student engagement was not used for analysing the data. Alternatively, the data were scanned, categories were generated, and associations between categories were identified. The process was exploratory and not intended to generate theory or establish generalisable relationships.

Results
(a) Classification and coding
The 104 summary sheets were perused by two researchers who identified five broad categories thought suitable for classifying the majority of the data. These were:

- Relationships;
- Focus - process of being focused (e.g. concentration) and the object of the focus (e.g. learning);
- Instructional design;
- Facilities; and
- External environments.

However, when the data were coded according to this classification, the manifest content in the student comments were not sufficiently well defined by these five categories. In particular, focus, instructional design and facilities were ambiguous and lacked clarity. An re-examination of the data showed that most of it (~ 95%) concerned relationships, learning orientation, and student confidence. The remaining data (~ 5%) centred on out-of-school activities including homework. Student comments about these aspects of themselves and their engagement in learning were then identified, coded and then entered into a spreadsheet for a more detailed analysis – 285 comments were classified.

The analysis revealed that student comments on relationships (Category 1.0) were predominantly about:
- Classmates (Category 1.1);
- The teacher (Category 1.2); and
- A small proportion referred to parents (Category 1.3).

The comments on learning orientation (Category 2.0) described the student’s:
- Own learning (Category 2.1);
• *Learning with others* (Category 2.2); and
• *Teacher instruction* (Category 2.3).

The comments on *confidence* (Category 3.0) concerned:
• *Faith in ability* (Category 3.1);
• *Perseverance* (Category 3.2);
• *Reservations* (Category 3.3); and
• *Anxiety* (Category 3.4).

The final category of *out-of-school activities* (Category 4.0) included:
• *Homework* (Category 4.1); and
• *Other commitments* (Category 4.2).

A more detailed examination of the data indicated a third level of categorisation was appropriate for most of the second level categories. For example, *relationships* with *classmates* were explained by some students as *supportive* of their learning (Category 1.1.1), and by other students as *disruptive* (Category 1.1.2). Consequently a three-level classification schema was used to interpret the data. This is presented in Table 2 which also shows the percentage of total comments for each category in the schema.

<table>
<thead>
<tr>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Relationships (20.7%)</td>
<td>1.1 Classmates (7.1%)</td>
<td>1.1.1 Supportive (3.9%)</td>
</tr>
<tr>
<td></td>
<td>1.2 The teacher (12.5%)</td>
<td>1.1.2 Disruptive (3.2%)</td>
</tr>
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<td></td>
<td>1.3 Parents (1.1%)</td>
<td>1.2.1 Encourages students (5.0%)</td>
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<td></td>
<td></td>
<td>1.2.2 Commands respect (1.1%)</td>
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<td></td>
<td></td>
<td>1.2.3 Alienate students (6.4%)</td>
</tr>
<tr>
<td>2.0 Learning orientation (50.2%)</td>
<td>2.1 Own learning (32.4%)</td>
<td>2.1.1 Self-reflection (10.0%)</td>
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<td></td>
<td></td>
<td>2.1.2 Motivation (4.3%)</td>
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<td></td>
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<td>2.1.3 Application (11.0%)</td>
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<td></td>
<td></td>
<td>2.1.4 Avoiding application (7.1%)</td>
</tr>
<tr>
<td></td>
<td>2.2 Learning with others (10.7%)</td>
<td>2.2.1 Competing (3.2%)</td>
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<tr>
<td></td>
<td></td>
<td>2.2.2 Asking and listening (3.2%)</td>
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<td>2.2.3 Contributing (3.2%)</td>
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<td>2.2.4 Off-task (1.1%)</td>
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<td></td>
<td>2.3 Teacher instruction (7.1%)</td>
<td>2.3.1 Self regulation (3.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.3.2 Direction (3.9%)</td>
</tr>
</tbody>
</table>
3.0 Confidence  (23.5%)
  3.1 Faith in ability  (8.2%)
    3.1.1 Academic performance (3.9%)
    3.1.2 General outlook (4.3%)
  3.2 Perseverance  (3.6%)
    3.2.1 Efficacious (3.6%)
  3.3 Reservations  (8.5%)
    3.3.1 Qualification (1.4%)
    3.3.2 Inconsistency (4.6%)
    3.3.3 Weaknesses (2.5%)
  3.4 Anxiety  (3.2%)
    3.4.1 Tests (1.4%)
    3.4.2 Self doubt (1.8%)

4.0 Out-of-school activities  (5.7%)
  4.1 Homework  (3.2%)
    4.1.1 Completing homework (1.8%)
    4.1.2 Not completing homework (1.4%)
  4.2 Other commitments  (2.5%)
    4.2.1 Recreation, sport and community (2.5%)

(b) The meaning of the categories
The following section uses examples of student comments to illustrate the meaning of the respective categories.

1. Relationships
Relationships with classmates were viewed as both supportive and disruptive. Friendships provide assistance in dealing with difficult matters - friends sometimes deal with big problems (BU02). Peer relationships also allow for expression of opinions and the provision of assistance - [I] listen to other's opinions and bring together (G18) and I feel like the second teacher, it's easy for me, so I help others (N013). The negative side of peer relationships includes bullying - bullying is a major issue (BU06); and students being distracted from their work - it's hard to concentrate if it's too noisy (B08), there are a lot of class distractions (GO25), I avoid sitting with others who will distract me (GO25), and the class stuffs around when I want to work (NO31).

Relationships with the teachers were also perceived in different ways. Some teachers were seen to be encouraging students – the teacher "bonds" with students. She shows us her life experiences to help us (N030), and my teacher tries to get us to keep a positive attitude (N014). A small number of students reported having respect for their teacher - Do what the teacher says (G13), and what teacher says is best (G14). However other students were highly critical of the teacher and their relationship - [I] go to other teachers to get help (N04), She ignores us so we help each other out (N04), the teacher does not expect much of me (NO27), and [I] like the subject and school, but disappointed in teachers (BU04).
Only a small number of students mentioned their parents and they provided limited examples of how their relationship with either mother or father influenced their engagement at school.

2. Learning orientation
Half of the data were about student learning orientation and referred to the students learning as individuals (own learning), learning with others (peers), and learning from the teacher (teacher instruction).

Four aspects of own learning were identified – self-reflection, motivation, application, and avoiding application. Students recounted how they reflected on the progress of their learning - I think about my mistakes (GO36), [I] focus on strengths and weaknesses (G18), and tests tell me about my strengths and weaknesses (NO21). They expressed various reasons for being motivated - I like it when I get a high score (B09), doing it because I have to (D07), and I have goals. I want to do nursing at Uni so I want to do well (GO31). Application to own learning was illustrated by attitudes and behaviours such as - I'll put all my effort into it (NO28), I go over things to improve (GO30), [I] like to get right into assignments as soon as possible (BU03), and [I] work hard to figure problems on my own (BU04). In contrast, some students explained they deliberately avoided or ignored pressure for participating in classroom activities and completing tasks intended to further their learning - I know how to apply myself, I just don't (K03), I just quit when it gets hard (NO16,) I don't care. I don't see the point of being here (NO30), and if I don't graduate, I'll deal with it (NO30).

Students suggested four types of behaviours when learning with others – competing, asking and listening, contributing, and off-task. Competing with others was seen as a motivational strategy - who doesn't compare. Look at how you can improve (B08), comparing with others motivates me (NO15), and competing with a friend motivates me (NO12). Asking and listening were important aspects of working together – no right or wrong, listen to others (B08), I ask others and get help. It's okay (GO20), and good to know and ask others about useful strategies (G18). Students who contributed were active participants – we explain to others what we understand (N01), we have discussions and compare answers (NO14), and we need to explain things to our friends so we learn from each other (NO22). The off-task aspect showed that learning with others does not necessarily happen - the class is lazy so I do no work (GO33), I talk and get off the topic (GO34), and we don't do much. We just make jokes and laugh (NO27).

Two emphases of teacher instruction emerged from the data – self-regulation and direction. Self-regulating learning is encouraged when – [the] teacher looks at what you can and can't do - she wants you to figure it out (B06), she will ask us to explain HOW we know that (GO38), and my teacher guides us but lets us be (NO11). Alternatively some teachers were
more direct in their instruction – [the] **teacher makes it easy to learn because she explains things clearly** (B09), **I am aware of my errors, the teacher tells me** (GO25), and **most of our choices are teacher-directed** (GO29).

3. Confidence

Student **confidence** was associated with four attributes - faith in ability, perseverance, reservations, and anxiety. Some students’ faith in their ability derived from their academic performance - *I know I can improve my grades* (NO29), *I am very confident. I am an "A"* (GO27), *[I’m] pretty good at Science* (K01). Other students’ had a general sense of surety about their confidence – *feel confident. Can do it* (BU05), *better this year, more confident* (BU09), *I do expect difficulties to work out* (GO27).

Very persistent students were efficacious – *always try, never give up* (G18), *nah, I will not give up* (GO22), and *I keep trying till I know it* (GO28).

Students with less confidence expressed some reservations by qualifying their view, noting inconsistency in confidence across different situations, or identifying weaknesses in their learning. Qualification - *it confuses me so I don't like it, but I'm confident* (GO28) and *if I thought I could do it, I probably could then* (GO 34). Inconsistency - *I can't do problems. I can do numbers* (NO27) and *I can do some things, but most of it is too hard* (GO37). Weaknesses - *[I] Feel lost* (D06) and *I'm lowest in class. Everyone understands but me* (GO37).

Some anxiety emanated from experience in tests - *very stressed with tests* (BU10) and *the day of a test I get anxious* (NO15); General self doubt was also associated with anxiety - *I get a bit panicky* (B07) and *not much faith in my ability* (NO22).

4. Out-of-school activities

Home and other commitments constituted **out-of-school activities**. Completing and not completing homework were referred to – *[I] do lots of homework* (BU04) and *[I] don't do homework* (N04). Other commitments - *I coach a lot and have other commitments - that makes it hard* (GO28) and *I have many after school activities* (NO22).

In summary, the interview data on student engagement in classroom learning was classified into three levels. The first level comprised five categories, the second level comprised twelve categories and the third level comprised 27 categories. The predominant constructs were **relationships, orientation to learning, and confidence**. For each of these constructs there was strong evidence of positive and negative influences on engagement.
Discussion
The following discussion is organised according to the data classification categories.

First, relationships are a frequently acknowledged aspect of engagement. Kenny, Blustein, Haase, Jackson and Perry (2006) viewed school engagement as positive attitudes towards classmates and teachers. When Fredricks, Blumenfeld and Paris (2004) classified the research on engagement, one of the classifications focussed on positive and negative reactions to teachers and classmates. One of the scales in the Student Engagement Questionnaire (SEQ) (ACER, 2007) measures student and staff interactions - the level and nature of students’ contact and interaction with teaching staff. Janosz, Archambault, Morizot and Pagani (2008) considered that social integration within the school (e.g. social isolation/rejection, quality of student-teacher relationships) characterises school engagement. The relationship between the student and the teacher is particularly important and this importance is reflected in the data from this study by the proportion of references to relationships with the teacher – 12.5% of the total comments. The small number of comments about relationships with parents is due to the interview questions which focussed on the classroom.

Second, student’s and teacher’s orientation to learning is a fundamental aspect of engagement in the classroom. Hughes and Zhang (2006, p. 406) defined classroom engagement to be indicated by “…student effort, attention, persistence, and cooperative participation in learning”. Positive attitudes toward academic learning are part of school engagement (Kenny, Blustein, Haase, Jackson and Perry, 2006). The behavioural classification of engagement research includes involvement in academic activities (Fredricks, Blumenfeld and Paris, 2004). The extent to which expectations and assessments challenge students to learn and students’ efforts to actively construct knowledge are constructs assessed in the Student Engagement Questionnaire (SEQ) (ACER, 2007). Students owning and valuing learning was identified in a study of teacher perspectives on engagement (Harris, 2008). For this study, half of the comments (50.2%) concerned orientation to learning.

Third, student confidence emerged from nearly quarter (23.5%) of the comments suggesting a strong connection with student engagement. In the literature, Hughes and Zhang (2006) noted that student persistence indicates classroom engagement. Furrer and Skinner (2003) also associated student persistence with engagement. In a study of university student engagement, London, Downey and Mace (2007, p. 456) proposed that engagement encompassed “… individual factors include[ing] competence beliefs, concerns and expectations of bias around social identities, and conception and of coping with the context”. Harris (2008, p. 65) reported that teachers viewed students ‘… being motivated and confident in participation in what happens at school” as a category of engagement.
Fourth, while out-of-school activities were not a major constituent of these comments (5.7%), engagement with school or schooling is often associated with participation in extracurricular activities (Jansz, Archambault, Morizot and Pagani, 2008). Classifications of engagement research include involvement in social or school activities, and in extracurricular activities (Fredricks, Blumenfeld and Paris, 2004).

**Conclusion**

The outcomes of the study are significant for several reasons. First, the classification schema is an empirically derived conceptual framework of positive and negative aspects of student engagement in learning.

Second, it provides a view of engagement that shares similarities in content with other views but has an alternative structure. This structure could have utility for instrument design in future investigations.

Third, the veracity of the schema as a representation of student engagement in classroom learning is strengthened by the amount of data analysed and the diversity of students. 105 interview recordings were analysed and these were collected throughout country Western Australia.

Fourth, the meaning of the categories in the schema was illustrated by examples of the student’s comments. The voice of the students qualified the constructs emerging from the data. This is important because it provides real examples of how the constructs are seen by students with the student voice, which can be used in professional development materials for teachers.

Fifth, while the constructs identified in this study were derived empirically, they are similar to those found in previous theorising about student engagement and research into student engagement. The inferences from the investigation are well connected to theory.

Finally, this study was only one part of a much larger mixed-methods investigation conducted in both metropolitan and country schools. More data will be available which will facilitate triangulation of findings from data collected in different ways (e.g. self-report, researcher completed, interviews, surveys) and from different analytic techniques (deductive and inductive methods, statistical testing, data modeling). This study has the potential to contribute strongly to the outcomes and validity of the larger project.
References


