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Re-engaged students’ perceptions of mainstream and flexible learning environments – a ‘semi-quantitative’ approach

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ABSTRACT
Flexible Learning Options (FLOs) attempt to enable secondary school completion by young people for whom ‘mainstream’ schooling has not worked well. Despite their proliferation and the increased research attention to understanding the mechanisms at work within such programmes, quantitative methods have not been utilised to compare participants’ perceptions of the learning environments of FLOs and mainstream schools. This study describes the development and application of a quantitative instrument to assess re-engaged Australian students’ perceptions of an FLO relative to their previous (mainstream) schools. Findings indicate that, on average, young people rate the learning environment more highly at the FLO than at the mainstream school from which they disengaged, indicating that the learning environment of the FLO aligns more closely with the needs of its student cohort. However, bimodal results for some instrument items highlight that the learning environment is influential, but not necessarily a precondition of school disengagement or re-engagement. Implications of this study are considered, with attention to the complexities that mainstream schools and FLOs negotiate in creating effective learning environments for diverse young people.

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KEYWORDS
School disengagement; disadvantaged youth; alternative education; learning environment; quantitative analysis

Introduction
Premature disengagement from education is a widespread and multivariate problem affecting an increasing number of youth (Mills and McGregor 2010; te Riele 2012; Lewthwaite et al. 2017; Thomas et al. 2017). The practice of early school leaving correlates with a range of dispositional and structural factors. Dispositional factors include disaffection with learning and academic achievement, perceived student-teacher antipathy, and student intention to exit (Curtis and McMillan 2008; Lewthwaite et al. 2017). Structural factors include low socio-economic status, non-traditional family structure, gender, Indigenous status (in this study’s case, Australian Aboriginal or Torres Strait Islander). Parental background characteristics, such as low-skilled occupation and non-completion of
post-secondary education or equivalent training, are also considered contributing (struc-
tural) factors (Lange and Sletten 2002).

Despite the attention given to the identification of structural and dispositional influ-
ences on the phenomenon of school disengagement, the potential contributions of stu-
dents’ perceptions of the learning environment have been underemphasised. Research
has frequently incriminated the learning environment of mainstream schools as a contrib-
uting factor to student disengagement (Borrell et al. 2011) or, at least, as unable to ame-
liorate personal and environmental influences on the disengagement process (Lewthwaite
et al. 2017; Thomas et al. 2017). Simultaneously, the school and classroom learning
environment at Flexible Learning Options (FLOs) is often lauded for its contribution to
the educational re-engagement of disenfranchised young people (Gutherson, Davies,
and Daszkiewicz 2011; Mills and McGregor 2014). This article explores the perceptions
of a group of re-engaged students with regard to their experiences in both mainstream
and flexible learning environments.

Nash (2002) has demonstrated the usefulness of the structure, disposition and practice
(SDP) model in explicating a range of educational phenomena. For example, based upon a
seminal large-scale longitudinal study in Aotearoa-New Zealand, Nash and Harker (1998)
draw attention to statistically identified structural, dispositional and practice variables that
generate inequality in educational outcomes for New Zealand youth. Their quantitative
analysis exposes not only personal and environmental influences on student engagement
and achievement, but also school and classroom effects.

Of particular importance to the present study is the variability in educational out-
comes identified by Nash and Harker within a cohort of ‘at-risk’ young people. As
Nash (2001) observes, young people are often unduly generalised as ‘carriers’ of risk
emanating from the structures in which they operate. Reductive quantitative analyses,
Nash comments, unhelpfully imply that ‘… those who [disengage] do so because they
are the kind of people who probably will do so’ (Nash 2001, 202). The present study
seeks to illuminate the ways in which environmental structures potentially mediate the
relationship between disadvantaged students’ dispositions (i.e. perceptions of the learn-
ing environment) and the practices of educational disengagement and re-engagement.
We posit that a cohort of FLO participants who have undertaken particular practices
(i.e. disengagement from mainstream schooling and re-engagement through an FLO),
may be comprised both of young people disposed to disengage from non-conducive
learning environments, as well as young people who maintained the disposition to
remain within the mainstream schooling environment but lacked requisite structural
support to do so.

**Flexible learning options in Australia**

Australia’s burgeoning flexible learning sector has developed as a diverse range of pro-
grammes designed to meet the educational needs of disenfranchised secondary students.
Riele’s (2012) comprehensive mapping of the flexible learning landscape in Australia
has identified four dominant categories of FLOs: (1) engagement and enabling pro-
grammes within ‘mainstream’ secondary schools; (2) general educational programmes
within community colleges that focus on Year 12 attainment and work preparation; (3)
independent programmes within ‘mainstream’ schools or community college settings;
and (4) independently registered alternative schools. The latter type of FLO provides the context of the present study.

The ongoing expansion of Australia’s flexible learning sector has spurred research into the efficacy of FLOs and, subsequently, efforts to identify and understand the mechanisms at work in the educational re-engagement of young people (Lewthwaite et al. 2017; Thomas et al. 2017). While FLOs’ principles of practice are well documented in the alternative education literature, they have been substantiated almost entirely through small-scale, case study research approaches and a limited number of purely descriptive narrative accounts, including a phenomenologically informed methodological study complementing this quantitative inquiry (Lewthwaite et al. 2017; Thomas et al. 2017).

Research on FLO participants keenly distinguishes young people ‘of difference’ whose markers of disadvantage have served to push them out of mainstream schooling. Indeed, this recognition of heterogeneity is at the heart of FLO pedagogies seeking to foster flexibility and improved pastoral care in education. At the same time, this research lacks a systematic treatment of how identified background characteristics – including, inter alia, substance misuse, contact with the juvenile justice system, carer responsibilities and poverty – may disparately impact within-cohort experiences of mainstream schooling and FLOs. While the present study does not differentiate FLO participants according to such variables, it illustrates that such differences are likely to exist. Although FLO participants – whose background characteristics mark them collectively as ‘at-risk’ of disengagement – share in common certain aspects of their educational trajectory, they do not demonstrate homogenous attitudes to their educational experiences, in particular with regards to mainstream schooling. Identifying and unpacking such differences may serve to enhance educational provision for students ‘of difference’ both in mainstream settings and FLOs.

Extant research on FLOs has sought to better understand participants’ educational disengagement and re-engagement through primarily qualitative means. Absent from the international literature is a large-scale, systematic comparative analysis of how young people perceive mainstream and alternative learning environments. This study utilises a semi-quantitative learning environment research (LER) instrument to compare young peoples’ perceptions of the mainstream and flexible learning environments and illuminate the heterogeneous contributions of these environments to their disengagement from schooling and subsequent re-engagement in a FLO. The semi-quantitative approach piloted here complements extant qualitative research in the flexible learning space by providing the researcher tools to study the distribution of a cohort’s perceptions of the learning environments at mainstream schools and FLOs in order to identify avenues for the fruitful exploration of difference.

We do not advocate quantitative analysis for its own sake and reject the notion that quantitative measures should carry more weight than qualitative assessment in academic or policy domains. Whereas the literature on alternative education has been explicit and comprehensive in establishing the diversity of young people in FLOs with regard to their personal background circumstances, the LER instrument comprises a scalable research tool that may be used to highlight heterogeneity of young people’s reflections on their experiences in mainstream schools and FLOs.
Methods

Learning environment research

Over the past few decades, the physical and psychosocial characteristics of the learning environment have become a well-established area of educational research (Moos 1974; Walberg 1979; Tobin and Fraser 1998). Foremost, LER has been grounded in Kurt Lewin’s field-theory premise that human behaviour – such as school engagement as a social-psychological phenomenon – is a function of personal attributes and environmental factors (Lewin 1936). Factors influencing student learning experiences and, consequently, engagement and disengagement, may include the quality of instruction and student-teacher relationships, relevance of curriculum and availability of learner support systems at both the classroom and school levels (Brady 2006). Understanding the characteristics of the learning environment, primarily through quantitative data of students’ perceptions of their experiences, has become a hallmark of LER (Fraser 1998). Few fields of educational research boast such a rich and contextually diverse array of tools to quantitatively measure students’ perceptions as LER. LER instruments typically contain an economical number of Likert-type scale items pertaining to dimensions or factors identified in the literature and verified qualitatively by participants as representative of the preferred learning environment. Instruments typically occur in two forms, representing students’ current and preferred environments, respectively. As stated by Fraser (1999), analysis of aggregated data may provide a detailed, comparative account of varied youth experiences. These measures comprise a statistical base for articulating an underlying distribution of student perceptions. Generalised conclusions may then inform adaptations of the learning environment to better support students’ needs. As endorsed by Nash (2002), this statistical information is integral to the development of an explanatory and anticipatory model to inform decision making for adjusted practice to promote equitable student engagement and achievement. These conclusions commonly result in advocacy for systemic change in practice to support student engagement and learning (Lewthwaite 2000; Lewthwaite and Fisher 2004, 2005).

Although scores of LER instruments have been developed for mainstream settings (for example, What is Happening in this Class? (WIHIC: Fraser, Fisher, and McRobbie 1996), no learning environment instrument has been developed that quantifies perceptions of the FLO environment, with attention to how young people perceive this environment in contrast to their previous experiences in mainstream schools. This study describes the development of such an instrument, as well as its contribution to understanding young people’s perceptions of mainstream and flexible learning environments.

Developing the instrument

The protocols associated with LER instrument development were applied in order to develop a unique instrument, suitable to the FLO context. These included:

1. Consistency with existing instruments – Although many LER instruments exist, a review of the literature revealed only two used to investigate the experiences of young people in educational re-engagement programmes: (Merton and Parrott 1999; Steer 2007). Noteworthy is Merton and Parrott’s use of eight-item Likert-type
scales to capture students’ agreement with instrument statements, as well as the parsimony of Steer’s instrument – a critical aspect in light of FLO participants’ often limited literacy.

(2) Coverage of existing knowledge of Effective Learning Environments for Disengaged Youth – Drawing from Moos’ (1974) seminal work in LER, as well as contemporary work in the FLO literature (for example, Curtis and McMillan 2008; Mills and McGregor 2010; te Riele 2012; Lewthwaite et al. 2017; te Riele et al. 2017; Thomas et al. 2017), the instrument covered dimensions of relationships, personal development and system operations identified by Moos as foundational to positive learning environments. These categories seek to capture the complex amalgam of influences on young peoples’ engagement in mainstream and flexible learning environments and inform the inclusion of specific items – at both the classroom and school/FLO levels – resident within Moos’ three dimensions.

(3) Economy of use – A critical parameter of LER instrument development – and imperative in the flexible learning context – is to ensure the instrument is not so lengthy or abstruse that it frustrates respondents. In addition, large-scale deployment of the instrument needed to be timely and cost effective. Hence a provisional instrument was developed containing only the attributes identified as essential in the literature and reinforced in the study’s initial qualitative stages (Lewthwaite et al. 2017; Thomas et al. 2017).

The eight learning environment attributes, Moos’ corresponding dimensions and the instrument items pertaining to each attribute are presented in Table 1.

The provisional instrument contained three sections: a biographical component with short response requirements to record respondents’ background characteristics; a survey querying students’ agreement – recorded on an eight-item Likert-type scale – with various statements pertaining to attributes of the learning environment of respondents’ previous mainstream schools; and a survey pertaining to the same attributes at the current FLO. The provisional instrument was trialled with young people at a North Queensland FLO. Based upon this pilot, the language of the instrument was simplified and the Likert-type scales were clarified. Due to literacy requirements and latent ambiguity of the survey items, it was determined that the instrument would be invigilated with

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Dimension</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-Teacher Relationship</td>
<td>Relationship</td>
<td>Teachers at my school are (were) there to help me as a learner</td>
</tr>
<tr>
<td>Perceived Value as a Learner Safety</td>
<td>Relationship System Operations</td>
<td>When I was (am) at school I was (am) valued and respected I felt (feel) safe at school</td>
</tr>
<tr>
<td>Content Flexibility</td>
<td>System Operations</td>
<td>This course of study is (was) flexible enough to suit my learning needs</td>
</tr>
<tr>
<td>Pedagogical Flexibility</td>
<td>Systems Operations</td>
<td>The school and its teachers made (make) changes to their teaching to assist me in learning</td>
</tr>
<tr>
<td>Student Contribution to Curriculum Programme Relevance</td>
<td>Systems Operations Personal Development</td>
<td>At school I was (am) able to have input into what was (is) important for me and my learning The school offers (offered) programmes and learning opportunities that are (were) important to my future</td>
</tr>
<tr>
<td>Teaching Relevance</td>
<td>Personal Development</td>
<td>The teaching at school was (is) relevant to my everyday life</td>
</tr>
</tbody>
</table>
individual support as required. Once adjusted, the instrument was uploaded to Survey Monkey™ for participant completion. Informed consent was obtained from all participants.

**Study participants**

In total, 41 of the 46 young people then enrolled at the FLO completed the instrument (response rate: 92%). Table 2 provides select descriptive statistics of students’ biographical data – the structure in which disengagement and re-engagement occurred.

Where relevant, we compare respondents to the wider Australian student population to highlight the circumstances in which the FLO participants operate. On average, the students were 16.5 years of age at the time of survey completion, though respondents’ age ranges from 13 to 24 years. There were slightly more male than female students. With regards to home environment, half of the FLO students lived with one or both parents – compared to 97% of all Australian youth in the 15–17 age bracket (De Vaus 2004). The remaining half resided with a non-parental relative (22%), with friends (20%), with a partner (7%) or with carers (2%). One in five had moved house at most once. However, 58% of respondents had moved at least four times in their lives, implying that students in our study moved an average 3.8 times, with an equivalent average duration of 4.7 years per residence. In contrast, average duration in current residence of 15–19 year olds in Australia is estimated at 8.7 years (Wilkins, Warren, and Hahn 2009), indicating the study cohort has experienced nearly twice as many residence interruptions as their contemporaries. Neither of the parents of nearly a fifth of the students in our sample completed year 12 education, which is comparable to the Australian average (ABS 2009). Overall, approximately 46% of the FLO students have at least one parent who did not complete year 12. Finally, the study cohort had on average spent fifteen months at the FLO at the date of interview. Overall, mean indicators revealed a – structurally – diverse group of

**Table 2. FLO student descriptive statistics.**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years):</td>
<td>16.5</td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.56</td>
</tr>
<tr>
<td>Female</td>
<td>0.44</td>
</tr>
<tr>
<td>Lives with:</td>
<td></td>
</tr>
<tr>
<td>Parent(s)</td>
<td>0.49</td>
</tr>
<tr>
<td>Relatives (other than parents)</td>
<td>0.22</td>
</tr>
<tr>
<td>Partner</td>
<td>0.07</td>
</tr>
<tr>
<td>Friends</td>
<td>0.20</td>
</tr>
<tr>
<td>Carers</td>
<td>0.02</td>
</tr>
<tr>
<td>Number of house moves in their life:</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>0.05</td>
</tr>
<tr>
<td>Once</td>
<td>0.15</td>
</tr>
<tr>
<td>2–3 times</td>
<td>0.22</td>
</tr>
<tr>
<td>4–5 times</td>
<td>0.24</td>
</tr>
<tr>
<td>more than five</td>
<td>0.34</td>
</tr>
<tr>
<td>Educational attainment parents:</td>
<td></td>
</tr>
<tr>
<td>Both parents did not complete year 12</td>
<td>0.19</td>
</tr>
<tr>
<td>One of both did not complete year 12</td>
<td>0.27</td>
</tr>
<tr>
<td>Both parents at least completed year 12</td>
<td>0.54</td>
</tr>
<tr>
<td>Duration at FLO (in months):</td>
<td>14.6</td>
</tr>
</tbody>
</table>
FLO participants likely to be ‘carriers’ of risk, inferring that respondents’ background characteristics may have contributed to their educational disengagement, though students were not shown to be uniformly disadvantaged.

Additional biographical information (not depicted) was used to identify potential influences on students’ engagement: patterns of previous and current attendance; prior (dis)engagement and reasons including, for example, health matters and family responsibilities; family structure; and mode of transport to school or FLO.

Results

This section describes the findings of sections two and three of the LER instrument application, that is, a quantitative comparison of students’ perceptions of the learning environments of their previous schools and current FLO. A summary of findings is followed by a discussion of insights relevant to students’ learning environment experience that the instrument potentially obscures and the validity of using the instrument in our particular case given the instrument’s underlying assumptions.

Student perceptions of the ‘Mainstream’ and flexible learning environments

Table 3 contains the results of the analysis. Mean and median learning environment attribute scores are presented for students’ previous schools and current FLO. The measurement of attributes with Likert-type scales produces ordinal, rather than interval, data. Our analysis is therefore based on attribute medians, though these are qualitatively similar to their corresponding mean scores. Since an eight-point scale (1 = very unhappy to 8 = very happy) was used, median scores below 4.5 indicate overall unfavourable student perceptions of the attribute. Combined results indicate that, on the aggregate, students’ current perceptions of their previous learning environments tend to be unfavourable. While we observe negative median scores for all attributes, attributes two (‘The programme of study was flexible enough to suit my learning style’), six (‘When I was at school I was valued and respected’) and eight (‘The school and its teachers made

<table>
<thead>
<tr>
<th>Attributes of the learning environment</th>
<th>Mean&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Median&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>previous</td>
<td>current</td>
</tr>
<tr>
<td>1. Teachers at my school were (are) there to help me as a learner</td>
<td>4.1</td>
<td>7.0</td>
</tr>
<tr>
<td>2. The programme of study was (is) flexible enough to suit my learning style</td>
<td>2.7</td>
<td>6.1</td>
</tr>
<tr>
<td>3. The school offered (offers) programmes and learning opportunities that were (are) important to my future</td>
<td>3.8</td>
<td>6.5</td>
</tr>
<tr>
<td>4. The teaching at school was (is) relevant to my everyday life</td>
<td>3.9</td>
<td>6.3</td>
</tr>
<tr>
<td>5. At school I was (am) able to have input into what was (is) important for me and my learning</td>
<td>3.5</td>
<td>6.2</td>
</tr>
<tr>
<td>6. When I was (am) at school I was (am) valued and respected</td>
<td>3.2</td>
<td>6.5</td>
</tr>
<tr>
<td>7. I felt (feel) safe at school</td>
<td>3.9</td>
<td>6.7</td>
</tr>
<tr>
<td>8. The school and its teachers made (make) changes to their teaching to assist me in learning</td>
<td>3.2</td>
<td>6.3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Paired t-tests were used to test the null hypothesis of zero mean difference (current – previous). The null hypothesis was rejected for all statements at the five per cent significance level.

<sup>b</sup>Wilcoxon matched-pairs signed-ranks tests were used to test the null hypothesis of zero median difference (current – previous). The null hypothesis was rejected for all statements at the five per cent significance level.
changes to their teaching to assist me in learning’) generate the most negative responses. In contrast, students’ perceptions of the FLO learning environment are favourable across all eight attributes.

A Wilcoxon matched-pairs signed-ranks test was conducted to test the null hypothesis of zero median difference between students’ perceptions of their current and previous learning environments for all eight attributes. We reject the null hypothesis of no difference at the five per cent significance level for all attributes. Evidently, the cohort as a whole views the learning environment of the FLO more favourably than that of their previous schools.

**Obscured insights: median analysis and the distribution of student perceptions**

Cohort mean and median scores – presented in Table 3 – are only meaningful if the underlying data is distributed normally. If instead the data exhibit uniform or complex distributions, descriptive averages are less informative. Specifically, multimodal distributions would indicate that respondents hold a diversity of views concerning their current and previous learning environments. However, analysis of mean and median differences in students’ perceptions of their former and current learning environments does not readily reveal the heterogeneity of opinion among students. Apparent multi-modality is explored in Figure 1, which illustrates the distributions of student perceptions about the eight learning environment attributes of their previous schools.

For example, perceptions concerning item one (‘Teachers at my school were there to help me as a learner’) are apparently bimodal (with peaks on either side of the spectrum). We observe similar patterns of ostensible bimodality for attribute three (‘The school offered programmes and learning opportunities that were important to my future’), five (‘At school I was able to have input into what was important for me and my learning’) and seven (‘I felt safe at school’). The distribution of attribute eight (‘The school and its teachers made changes to their teaching to assist me in learning’) exhibits more than two peaks. Such distributional patterns reduce the informational value of mean and median scores. For example, the mean and median scores for attribute one are 4.1 and 4, respectively. However, the first panel in Figure 1 demonstrates that a value of 4 pertains to only a small minority of students.

Visual inspection of apparent multi-modality is subjective and can be influenced by the scale and shape of the graphed distributions. A dip test, which tests the null hypothesis of a unimodal distribution, was therefore conducted to provide a stronger statistical base for evaluation of the distributions (see Table 4). Unimodality is rejected at the five per cent confidence interval for students’ perceptions of five of the eight learning environment attributes of their previous schools, and four learning environment attributes at the FLO (at the one per cent confidence interval).

In all, these data indicate that FLO participants do not all share a negative outlook on most of the learning environment dimensions of their previous schools. Furthermore, strong correlation (results not shown) between individuals’ learning environment attribute scores indicates a group of students who generally perceive the learning environments of their previous schools favourably, but who nonetheless disengaged from mainstream schooling.
Table 4. Distributions of students’ perceptions of their previous and current learning environments.

<table>
<thead>
<tr>
<th>Attributes of the learning environment</th>
<th>Dip score&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Previous</td>
</tr>
<tr>
<td>1. Teachers at my school were (are) there to help me as a learner</td>
<td>0.11*</td>
</tr>
<tr>
<td>2. The programme of study was (is) flexible enough to suit my learning style</td>
<td>0.05</td>
</tr>
<tr>
<td>3. The school offered (offers) programmes and learning opportunities that were (are) important to my future</td>
<td>0.10*</td>
</tr>
<tr>
<td>4. The teaching at school was (is) relevant to my everyday life</td>
<td>0.08</td>
</tr>
<tr>
<td>5. At school I was (am) able to have input into what was (is) important for me and my learning</td>
<td>0.10*</td>
</tr>
<tr>
<td>6. When I was (am) at school I was (am) valued and respected</td>
<td>0.09</td>
</tr>
<tr>
<td>7. I felt (feel) safe at school</td>
<td>0.11*</td>
</tr>
<tr>
<td>8. The school and its teachers made (make) changes to their teaching to assist me in learning</td>
<td>0.10*</td>
</tr>
</tbody>
</table>

<sup>a</sup>Significant at the five per cent significance level.

<sup>**</sup>Significant at the one per cent significance level.

The dip score tests the null hypothesis of unimodality (Hartigan and Hartigan 1985).

Figure 1. Distribution of students’ perceptions of their previous learning environments.
Instrument validity: retrospectivity and perception heterogeneity

The data collected does not fully account for possible duration effects: the questionnaire does not differentiate respondents by the lengths of their disengagement and post re-engagement participation, which is problematic if these criteria are consequential to students’ perceptions of their previous learning environments.

As a result, the implementation of the LER instrument may itself contribute to observed heterogeneity of student responses. Student perceptions about the eight learning environment attributes of their previous schools are recorded retrospectively. Figure 2 illustrates the gaps between disengagement from the previous school, re-engagement at the FLO and date of interview. This total period covers time disengaged (between disengagement and enrolment at the FLO) and time engaged (between enrolment at the FLO and date of interview). Neither time disengaged nor time re-engaged is necessarily similar between students. Interpretation of observed differences in student opinions may be confounded if the duration of either disengagement or re-engagement bears influence on students’ perceptions of their former learning environments.

We hypothesise that through a personalised process of re-engagement at the FLO, students come to recognise the availability of alternative learning pathways. The existence of these pathways may imply systemic failures to accommodate individualised learning needs at their previous schools. Holistic pedagogies and ongoing interactions with their peers at the FLO may also serve to alleviate feelings of personal inadequacy and reinforce perceptions of the institutionalised disenfranchisement of young people. Over time, FLO participants may thereby develop increasingly negative perceptions of their previous learning environments. Alternatively, young people may be particularly distressed throughout the period of their disengagement. This may diminish their capacity to assess their own contributions to the disengagement outcome. Over time and independent of FLO enrolment, students may develop a greater sense of personal agency, leading to more favourable perceptions of their previous learning environments. Both of the effects posited here suggest that FLO participants’ perceptions of their previous learning environments may change over time.

Data collected reflect FLO student enrolment and interview dates; hence duration re-engaged can be established to test whether the above arguments trouble the analysis. Students’ mean duration of re-engagement is 14.6 months, with a standard deviation of 11.1 months. Hence, while respondents have generally spent more than a year at the FLO by the time of the interview, there is considerable spread around that average. If time re-engaged influences students’ perceptions of the learning environments of their previous

Figure 2. Timeline of retrospective data collection.
schools, the LER instrument may have produced artificial indications of heterogeneity. A Spearman’s rank correlation coefficient test was therefore conducted to test for correlation between time re-engaged and students’ perceptions of the eight attributes of the learning environment of their previous schools (see Table 5). Results provide no evidence that duration of re-engagement has influenced student perceptions.

Whilst time re-engaged is depicted, data provided by the LER cannot clearly define the start date of students’ disengagement period. Disengagement from education is a typically gradual process characterised by intermittent school attendance. Even with a clear indication of a student’s formal date of withdrawal from school, respondents’ ‘true’ period of disengagement cannot be reliably established for meaningful comparison. It is therefore not possible to test whether the length of reflection time influences students’ perceptions of their prior learning environments.

### Instrument validity: intervention duration and perception heterogeneity

A pre/post-intervention analysis theoretically pertains to three phases: a phase preceding the intervention in which a preliminary assessment of the learning environment takes place, the intervention phase itself, and a post-intervention phase in which a follow-up assessment of the learning environment takes place. The current study only included students still enrolled in the FLO – tracking young people over time after they have completed or left such programmes is markedly difficult – hence, respondents’ second assessment of the learning environment was undertaken amidst an ongoing intervention. Consequently, notwithstanding all respondents reporting higher levels of attendance at the FLO than at their previous schools, this is potentially a result of disparate student engagement within the FLO. Aggregated results equate exposure impacts across participants irrespective of FLO engagement intensity and enrolment duration.

Disparate student engagement should not confound the analysis if time re-engaged is sufficient to allow the effects of the intervention to manifest and stabilise. However, that minimum required duration is unknown. If time re-engaged in our sample is too short, inter-personal differences in student perceptions about the learning environment of the FLO may stem from disparate exposure to the intervention, rather than varied student preferences, per se. We conducted Spearman’s rank correlation coefficient tests to test for correlation between time re-engaged and student perceptions of learning environment

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**Table 5.** Correlation between time re-engaged (in months) and students’ perceptions of learning environment attributes of their previous schools.

<table>
<thead>
<tr>
<th>Attributes of the learning environment</th>
<th>Spearman rank correlation(^a)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teachers at my school were there to help me as a learner</td>
<td>0.21</td>
<td>0.24</td>
</tr>
<tr>
<td>2. The programme of study was flexible enough to suit my learning style</td>
<td>−0.09</td>
<td>0.61</td>
</tr>
<tr>
<td>3. The school offered programmes and learning opportunities that were important to my future</td>
<td>0.03</td>
<td>0.89</td>
</tr>
<tr>
<td>4. The teaching at school was relevant to my everyday life</td>
<td>0.04</td>
<td>0.81</td>
</tr>
<tr>
<td>5. At school I was able to have input into what was important for me and my learning</td>
<td>0.06</td>
<td>0.72</td>
</tr>
<tr>
<td>6. When I was at school I was valued and respected</td>
<td>0.12</td>
<td>0.49</td>
</tr>
<tr>
<td>7. I felt safe at school</td>
<td>0.20</td>
<td>0.25</td>
</tr>
<tr>
<td>8. The school and its teachers made changes to their teaching to assist me in learning</td>
<td>−0.04</td>
<td>0.82</td>
</tr>
</tbody>
</table>

\(^a\)Spearman’s rank correlation coefficient (p) test against the null hypothesis of no correlation (Spearman 1904).
attributes of the FLO (see Table 6). There is no significant evidence that time re-engaged influences student perceptions, i.e. duration of programme participation is ostensibly sufficient to establish robust effects of the intervention among sample respondents – validating our analysis.

### Discussion

This study augments the current literature on secondary students’ educational re-engagement through a larger-scale, systematic comparative analysis of students’ previous mainstream and flexible learning environments. Findings of the present study indicate that, on average, FLO participants rate their current learning environment more favourably than that of their previous schools across all aspects. This indicates that the FLO succeeds in providing a learning environment more closely aligned with the needs of a previously disengaged student cohort.

Nonetheless, the quantitative assessment presented here suggests the purported link between student perceptions of the learning environment and disengagement may be unduly reductive. The lack of uniformity among student responses warrants caution, as respondents are clearly not ‘equally “carriers” of a specified weight of disadvantage’ (Nash 2002, 400) in regards to how they perceive their previous school environments. The identified heterogeneity implies that the absence (at mainstream school) or presence (at FLOs) of particular dimensions of a positive learning environment cannot sufficiently explain participants’ disengagement or re-engagement. Effective strategies to prevent disengagement in mainstream schools and re-engage students through FLOs must account for such heterogeneity.

Nash’s (2003) use of the SDP models illustrates the importance of the context (i.e. the structure) within which disengagement takes place. That is, whether a student’s perception of the learning environment at school (a disposition) will lead to disengagement (a practice) depends on the social structure in which the student operates. We identify at least two avenues through which future research may better integrate structure within numerative analysis linking disposition to practice. First, researchers could expand the collection of young people’s background information to more comprehensively capture the various structures in which disengagement takes place. This information could be used to reveal links between disposition and practice while controlling for structural

<table>
<thead>
<tr>
<th>Attributes of the learning environment</th>
<th>Spearman rank correlation(^a)</th>
<th>(\rho)</th>
<th>(p)-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Teachers at my school are there to help me as a learner</td>
<td>0.00</td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>2. The programme of study is flexible enough to suit my learning style</td>
<td>0.11</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>3. The school offers programmes and learning opportunities that are important to my future</td>
<td>-0.02</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>4. The teaching at school is relevant to my everyday life</td>
<td>0.06</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td>5. At school I am able to have input into what is important for me and my learning</td>
<td>0.00</td>
<td>0.98</td>
<td></td>
</tr>
<tr>
<td>6. When I am at school I am valued and respected</td>
<td>0.14</td>
<td>0.46</td>
<td></td>
</tr>
<tr>
<td>7. I feel safe at school</td>
<td>0.05</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>8. The school and its teachers make changes to their teaching to assist me in learning</td>
<td>0.09</td>
<td>0.60</td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Spearman’s rank correlation coefficient (\(\rho\)) test against the null hypothesis of no correlation (Spearman 1904).
characteristics. Given the complexity of the structures in which disengagement occurs, this type of matching analysis would require a dataset necessarily richer (scope) and larger (scale) than the limited sample of the present study. Second, in absence of sufficient survey data, in-depth ‘narratives’ are required to illuminate the social structures within which the stories of these ‘numbers’ unfold. A complementary, mixed-methods approach is therefore vital to understanding the links between disposition and practice. Furthermore, as highlighted in our findings, ‘numbers’ in absence of ‘narratives’ fail to disclose that a learning environment perceived by young people to be effective would not necessarily prevent student disengagement. Our results (see Table 2 and Figure 1) demonstrate that while negative views of the learning environment may be associated with early school leaving, they are not necessarily a precondition of educational disengagement.

Findings also reveal important inter-personal student differences not readily apparent through a simple analysis of mean and median scores. Bimodal distributions of self-response items – including perceptions of individualised teacher support, relevance of curriculum and personal safety, among others – indicate that students do not necessarily feel the same way about their previous learning environments. Student reflections on these items indicate a significant number of respondents regarded these dimensions of their previous schools in a positive light.

Despite this bimodality, students strongly contrast the ‘mainstream’ and FLO learning environments with regard to programme flexibility, student-directed learning, responsive pedagogy and emphasis on the value of young people. These findings indicate that FLO participants perceive mainstream schools much more negatively in dimensions that pertain to the accommodation of student difference. In brief, it is evident from these data that the dimensions of a positive learning environment, as defined by Moos’ dimensions and the corresponding instrument items, are not only and not always attributable to FLO environments. Despite this difference, there are dimensions that are perceived as statistically different.

Our quantitative analysis underscores the significant contrast concerning students’ perception of being valued and respected. We draw attention to this item because the present study is located within a broader investigation into the ‘value’ of the FLO experience (Lewthwaite et al. 2017; Thomas et al. 2017). What emerges from the qualitative component of the larger study is the overt attention young people ascribe to feeling ‘devalued’ within the mainstream context and in contrast to their current FLO, where they feel ‘valued’ and, subsequently, ‘re-evaluate and reform their sense of value’ (Lewthwaite et al. 2017; Thomas et al. 2017). Young people demonstrate an acute self-awareness of forces at work through their pre-FLO experience, especially in regards to personal attributes at the root of their difference. In addition, they demonstrate critical awareness of how society responds to that difference by limiting access to educational opportunity (Lewthwaite et al. 2017; Thomas et al. 2017). All commentaries provided evidence of participants’ consciousness of self and social condition and its contradiction – in particular, the inflexibility of mainstream education to be responsive, equitable and accessible to all students. While providing evidence of bimodality concerning student perceptions of several learning environment attributes, the quantitative analysis presented here reinforces students’ characterisation of their mainstream schooling experiences as lacking tangible enactment of value and respect of young people of difference. Respondents overwhelmingly affirm a dearth of course flexibility,
individualised learning support and provision of mental and emotional wellbeing support in their previous schools.

It would be valuable to determine if there is a statistical correlation between students’ perceptions of being valued and respected and other aspects of the learning environment, such as programme flexibility, student input into pedagogy and curriculum and individualised learning support. Ongoing research on marginalised Australian students (Lewthwaite et al. 2017; Thomas et al. 2017) underscores the statistical significance of an ethic of care evidenced in respectful, caring interactions, coupled with tangible actions to enable learning success (Lewthwaite et al. 2017; Thomas et al. 2017). Teachers who embody a highly developed ethic of care for students are more likely to seek appropriate ways to help students in their learning and manage behaviours that lead to school disaffection and poor outcomes (Perso and Hayward 2015). Most of the students in our sample represent demographic ‘difference’ in comparison to the wider Australian population. Their reflections on mainstream schooling reveal evidence of systemic ‘indifference to difference,’ which prevents marginalised students from accessing what mainstream education offers (Lingard 2007).

Implications

As stated by Fraser (1999), LER instrument applications and analysis of aggregated data provide a detailed, comparative account of varied youth experience in classroom and school environments and, in turn, inform adaptations of the learning environment to better support students’ needs. Nash refers to the use of quantitative data with ‘tolerable simplification as sociological common sense’ (2002, 397) that gives consideration to the understanding and collective interruption of processes that generate and perpetuate inequality. These perception data illuminate the variability in re-engaged students’ experiences with mainstream schools. It is evident that many students view their previous schooling environments favourably across several dimensions. Although FLO learning environment attributes are viewed positively across relationship, system operation and personal development dimensions, these perceptions are not uniformly viewed negatively across mainstream schools. Despite this promise of practice, the uniformly negative attention drawn by participants in this study to their previous mainstream settings in the areas of learning assistance, being valued and respected as a learner and programme flexibility should serve to challenge the practice of teachers and schools.

Despite the call for schools to deliver curriculum for all, the statistical data presented here suggest that students in this study perceive that mainstream schooling is only intended for some (Lewthwaite et al. 2017; Thomas et al. 2017). It is this phenomenon the FLO seeks to rectify through its principles of operation and practice. Participants’ mainstream experiences suggest inequity concerning schools’ acknowledgement and treatment of difference, and recognition of systemic marginalisation of disadvantaged students (Mills and McGregor 2012, 845). The critical challenge for educators – especially at the teacher-student interface – is to reflect upon how they illustrate who matters (and who does not), and how this is operationalised in the principles and practices by which classrooms and schools operate. In order to provide an equitable education for all, schools and their teachers must critically examine their practices to identify the subtle mechanisms by which some young people come to believe that schooling is not ‘for’ or ‘about’ them.
Summary

This paper highlights the potential of LER in addressing two current gaps in the FLO research field: first, understanding relative perceptions of mainstream and flexible learning environments; and, second, identifying suitable quantitative methods that contribute to a more comprehensive approach to understanding processes of student engagement and re-engagement (Light and Pillemer 1982; cited in Lewthwaite et al. 2017; Thomas et al. 2017). The instrument used in this study draws from LER and the flexible learning environment literature to elucidate perceptions of learning environment attributes known to influence student engagement and learning. Findings highlight that (1) while the learning environment is influential, negative perceptions are not necessarily a precondition of school disengagement; (2) consequently, any discourse or subsequent action that focuses exclusively on the ‘average’ disengaged young person may overlook student heterogeneity and thus underestimate the complexities negotiated by both mainstream schools and FLOs to develop effective learning environments. Quantitative analysis elucidates diversity among young people in FLOs concerning their experiences of mainstream schools. Strategies to prevent mainstream educational disengagement, as well as to re-engage young people through FLOs, must take this variability into account.

Acknowledgement

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Disclosure statement

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References


