INTRODUCTION
The situation often arises in educational research when experimental control is impossible or unethical, or when the phenomenon is interpreted from the perspective of the individuals being studied; qualitative approaches were recommended for such research situations. For example, in an attempt to understand the school life of adolescent female students, it would be impossible/unethical to impose any form of experimental control on the girls; instead, their school life experiences would have to be understood in the natural setting of schools, and the research methodology would involve the students giving an account of their views, attitudes, and reasons behind their actions.

For the qualitative researcher, the research repertoire includes a bountiful collection of techniques comprising: document analysis,
interviews, observations, tape or video recordings of speech, discussions or activities, and the collection of photographs, written work, or drawings. The type of data collected using qualitative methods are of value to researchers because such data tend to be rich, complex, and they occur in natural settings. However, the main problem confronting qualitative researchers is that of data authenticity: How can researchers be confident that he remaining 8 were born overseas. The local students were born in Sydney, Melbourne or Adelaide. The overseas students came from Hong Kong, Lebanon, Malaysia, Singapore, South America, and Sri Lanka. The migrant students had been in Australia between 1 year 4 months and 13 years, with an average time of about 7 years in Australia. With one exception, all students had excellent command of spoken English. The exception was a student from Hong Kong who spoke very little English.

Design and Procedures
The design made use of eight focus group sessions, which were conducted in the campuses of the 4 schools. The sessions took place between 18 April and 9 May 1994. The group size ranged from 4 to 6 students. The independent variables in this study were the three methods of data collection used in each focus group session, comprising (1) graphical representation of school life; (2) focus group interview, and (3) completion of open-ended questions. The order of employing the three data collection methods remained the same for all eight focus group sessions. Each session lasted for about one hour, and was tape recorded. The dependent variables for the study were (a) the comprehensiveness, (b) the uniqueness, (c) the robustness, (d) the clarity, (e) the expressiveness, (f) the utility, and (g) efficiency of the list of themes derived for each method of data collection.
Comprehensiveness (Rayner and Hermann, 1988) means completeness, and is measured by the ratio of the number of themes identified by each method of data collection, to the total number of themes identified by all methods of data collection. A data collection method is 100% comprehensive if it does not omit any themes related to the school life of Year 12 female students that are identified by all three methods employed in the study. A method of data collection is unique for a certain theme if it is the only method which identifies the theme (Rayner and Hermann, 1988). The criterion of uniqueness can be further explored beyond the unique/non-unique dichotomy; the importance of the specific uniqueness can be weighted by whether the theme is a strong, or a weak one, as indicated by either a high or a low frequency of mention of that theme by the participants. Robustness refers to the level of demand of the data collection method on the participant’s background and field setting. Clarity refers to the data quality in terms of whether the theme can be interpreted by the researcher without ambiguity. Expressiveness refers to the persuasiveness of data in articulating the theme. Utility refers to the usefulness of the method in providing knowledge to educational practice. Efficiency refers to the
the rate of themes or subthemes discovered per unit of time, in this case minute.

The researcher acted as a facilitator in all focus group sessions. At the beginning of each session, the researcher introduced herself to the students, and explained that the study was undertaken to develop an understanding on the school life experiences of Year 12 students from the studentsí perspective, and that there were no right or wrong answers. After the introduction, students spent 4 minutes speaking in pairs to one another, finding out about where they were born, and what they enjoyed doing in their spare time. Partners then introduced one another to the group. Each student was then given an A3 size white paper and some coloured pens. The students were invited to represent their school life graphically - including the use of icons, pictures, writing, labels or statements. A written instruction was given in the form of a piece of paper attached to the top right hand corner of the A3 paper, which stated: ATTITUDES TO SCHOOL LIFE - A VISUAL REPRESENTATION: On the sheet provided, try to graphically/visually summarise your school life and attitudes to it at the moment. You may wish to draw pictures, include labels etc. Feel free to modify or add to your representation during the interview. Students were given about 5 to 10 minutes to complete the drawings, but were allowed to add to the drawing during the next phase of data collection.

After 10 minutes of drawing, the researcher asked the students to discuss freely issues related to their school life. Several facilitating questions were used to bring the discussion to focus, including (a) When the pressure of assessments and assignments gets a bit much, to whom do you first speak? (b) At this school, is there someone you can talk to for advice or help? (c) What is one thing that this school has done to prepare you for the HSC and beyond? (d) What is something that you think the school should have done better or differently for you? (e) What do your parents want you to get for the TER, what do you expect to get and what do you plan to do after HSC? (f) How much input do your parents have in your homework and assignments and how often do they complain that you arenít working hard enough? (g) Is there too much pressure for you to do well in the HSC at this school?

After the Focus group interview, each student was asked to respond to an open-ended question, School life has both an academic and a personal side. For each aspect, write down three things (in order of importance) that you value MOST or consider MOST important in your school life; OR write down three things that the school has done for you in these two areas of your life. Briefly explain why each of these things is so important to you. About 10 minutes were spent on this last method of Open-ended Questions.

Data Analysis
The analysis was directed to answer the research question which
involves the selection of data collection methods in multi-method triangulation. Firstly the rationale behind the choice of the 3 data collection methods was discussed. Secondly, the data were content analysed for emerging themes. Then the methods of data collection were compared in terms of the method effectiveness, data quality, and method efficiency in eliciting relevant themes for understanding the school life of Year 12 girls. Method effectiveness was measured by the criteria of comprehensiveness, uniqueness, and robustness, while data quality is measured by clarity, expressiveness, and utility. Efficiency is measured by the ratio of the number of themes or subthemes identified to the total amount of time spent on the method.

RESULTS
Themes
A total of twelve major themes and 137 subthemes were identified by the 3 methods of data collection. These were: Stress, friends, HSC, self, future, teachers, parents, school counsellors, school, books, time, and family. Stress was defined by the participants as the psychological pressure they experienced, and the physical strains associated with it. The theme of friends was defined by the participants as the comradeship which offered empathy and support. Friends evolved as an important theme. All students said they would turn to friends first if the pressure was too much for them. The HSC theme was defined by the participants as the examination itself, the TER score, its relevance, or the consequences associated with the results of the HSC. The self theme was defined by the students as the students’ aspiration and expectations, their self image, and their acknowledgment of the transition to adulthood. The future theme was defined by the students as the uncertainty and expectations associated with what the future holds for them, and as the end of an era for them. The teachers theme was defined as the student-teacher relationship, the attitudes toward teachers, and the teachers’ help in the preparation for the HSC. The parents theme was defined by the students as parental expectations on the HSC performance, the students’ relationships with the parents, and the parents’ inability to provide instrumental help to their studies. The school counsellor theme was defined by the students as the students’ relationships with the school counsellor, and their disappointments toward the poor quality of the counselling service. The school theme was defined by the students as the quality and adequacy of the school curriculum, the student morale, and the education received from the school. The time theme was defined as the students’ complaint of not having enough time to prepare for the HSC. The books theme was defined by the students as the overwhelming academic work associated with the HSC examination, and was expressed as stacks of books or worn-out pencils. The family theme was defined by the students as their relationships with siblings, grandparents, or cousins, the competition amongst family members for higher TER scores, and as either
sources of support or stress. Stress was the most prevalent theme. Appendix 1 gives the meaning of these major themes as defined by the participants (See Krause and Mok, for a more detailed explanation of the themes). Each of these themes contained several subthemes. Table 1 provides the lists of subthemes for each major theme.

Insert Table 1 somewhere here

Comprehensiveness

Of the 3 methods of data collection, the Focus Group interview identified most subthemes. The comprehensiveness of each data collection method was compared utilising an index calculated by the ratio of the number of themes (subthemes) identified by the method to the total number of themes (subthemes) identified by all three methods. In terms of major themes, the Focus Group method is as comprehensive as the Drawing method; each with a comprehensive index of 0.92. The Open-ended Questions method only identified 9 of the 12 major themes, corresponding to a comprehensive index of 0.75 only. If comparisons were based on the number of subthemes identified, then the comprehensive index identified by the methods of Drawing, Focus Group Interview, and Open-ended Questions are, respectively, 0.61, 0.81, and 0.34. This result indicates that as far as the school life of Year 12 girls is concerned, Focus Group Interview is the most comprehensive method in identifying themes.

Uniqueness

The next criterion of comparing the three data collection methods was by means of uniqueness, which means whether the data collection method is unique in identifying the theme or subtheme. It can be see from Table 1 that the Drawing method is unique in identifying the theme of Books, which was presented graphically either as worn out pencils, stacks of books, books out of proportion, an open book, or a student reading a book. The theme was not identified by either the Focus Group Interview method, or by the Open-ended Questions method. Books emerged as an important theme. This theme was represented graphically in 15 of the 40 drawings (37.5%). On the other hand, the Focus Group Interview method is unique in identifying the major theme of school counsellors. This theme refers to the quality of the school counselling service in the schools. It was not represented in any of the pictures, nor in responses to the open-ended questions. School counsellors was an important theme; it was mentioned by 27 of the 40 students (67.5%) who participated in the Focus Group Interview. All but one of the 27 students who commented on the school counsellor had negative feelings against the school counsellor; who was taken as a joke, as a stranger to the students, or as someone who could not keep confidence, who was not really helpful, not particularly informative, and students elected
not to consult the school counsellor for fear of being misunderstood as a victim of harassment by the other students.

In terms of subthemes, the Drawing method was unique in identifying 13, the Focus Group Interview, 31, and the Open-ended Interviews 7 of the subthemes (Table 1). For the subthemes associated with Stress, Anger, Sleeplessness, Gaining weight, and Swinging moods were identified uniquely by the Drawing method, and the Escape subtheme was identified uniquely by the Focus Group Interview method. Of these, swinging moods was a significant subtheme, found in 10 of the drawings. It was represented graphically as smiles and tears, good and bad days, cloud and sun, or simply in words such as ‘moods swing’, or patches of red and blue labelled as frustration... contention... frustration again.

The Focus Group Interview method was solely responsible for all of the 4 uniquely identified subthemes related to friends; these subthemes were: the availability of friends (‘they are always there’), boy or girl friends, instrumental help offered by friends, or the friend as a role model. None of these uniquely identified subthemes were really strong ones; only one or two students had mentioned them. In contrast, the more predominant subthemes of closeness, comradeship, continuity after HSC, empathy, group, immediate access, importance, relaxing, and support were identified by more than one method.

The Focus Group Interview method accounts for all the uniquely identified subthemes associated with HSC (competition with many candidates, or with other schools, and the preparation of other schools for the HSC). These were prevalent subthemes, and had indeed contributed to one major source of stress; students were stressful because they had to compete with thousands of others, they felt that they had to beat 90% of the state, but the other schools are so far ahead and students reckoned that there is a difference between where you should be and where you are. All of these contributed to the stress experienced by students interviewed.

Each data collection method was unique in identifying some subthemes associated with the Self, including self-confidence, fulfilment of the self, self-potential, self esteem, the self image of being slack, and the student perceived need of study skills. Of these, the need for the development of better study skills was relatively more important, as it was frequently mentioned by students in all the focus groups during the interview sessions. The study skills subtheme was uniquely identified by the Focus Group Interview method.

All subthemes associated with the Future were identified by more than one data collection method. This might indicate that a major concern for the Year 12 girls was about what the future holds for them. This result is certainly substantiated by the literature; for example,
Kitwood (1977) discovered three themes on adolescents: interpersonal conflict, decision-making: a concern regarding what lies ahead in the future, and a concept which Kitwood termed standing-alone, which was comprised of 5 second-order concepts.

The Focus Group Interview was unique in discovering the Favouritism and the Trust subthemes associated with the teachers, while the Open-ended Questions method accounts for the unique identification of the Teaching subtheme. In the Focus Group Interviews students complained about certain teachers preferring Asian students and students who excelled academically only, but ignored those who were not doing well in academic subjects. Some students pointed out in the Focus Group Interviews that teachers could not all be trusted, while others in these interview sessions said that they could trust their teachers. On the other hand, in the Open-ended Questions, several students referred to the teaching they received as the most valuable experience from school.

Most of the subthemes associated with parents, and all subthemes associated with the school counsellor, were identified uniquely using the Focus Group Interview method. In contrast, all three methods were effective in discovering subthemes associated with the theme of school in that each of the methods was unique for some of the school subthemes.

The Drawing method was unique in discovering the theme of clock-faces in association with Time, and all subthemes for Books; while competition with family members was uniquely identified by the Focus Group Interview method.

In summary, the Focus Group Interview was the most effective amongst all three data collection methods according to the uniqueness criterion. This method has uniquely discovered more significant subthemes than the other two methods. The uniqueness index of the Drawing, the Focus Group Interview, and the Open-ended Questions methods in discovering major themes are respectively 0.08, 0.08 and 0. The uniqueness index of the Drawing, the Focus Group Interview, and the Open-ended Questions methods in discovering subthemes are respectively 0.08, 0.22, and 0.04.

Robustness
Robustness refers to the demand on the data collection method in terms of its reliance on the individualís background, in this case, the cultural and language backgrounds. The analysis revealed that the Drawing method was the most robust of all, followed next by the Focus Group Interview method, and the Open-ended Questions method was the least robust amongst the three. Expressing oneís feelings through picture drawing is universal, and is relatively free from cultural
and language borders. Almost all culture has drawings as one way of recording events or representing feelings. Drawing is applicable to people as young as 3 or 4 years old, and is unrestricted by the English proficiency of the individual. In contrast, both the Focus Group Interview and Open-ended Questions methods demand a certain degree of language proficiency, and more so for the Open-ended Questions method. Figure 1a shows the drawing of one of the participants from a non-English speaking background (NESB), Ellen, who has been in Australia for six years; several themes were depicted in the drawing, including: Stress (scared/panic/upset), friends, HSC (examination), future, teacher, books (overwhelmed), and family. In comparison, Figure 1b shows the response of the same student to the Open-ended Questions; the future and the family were the only themes identified, and in very poor quality too. The literature on second language acquisition suggests that writing proficiency is more difficult than speaking proficiency to be attained by second language learners. This is contrary to the findings in this study: The Focus Group Interview method was found to be more robust than the Open-ended Questions method in this study. On reflection, this makes perfect sense, because the NESB students were not speaking in solo at the Focus Group Interview; the session involved a group of students discussing and sharing together; the group dynamic was that students in the group, including Ellen, were supported emotionally by other members to get over the language barrier; ideas were supplemented by comments, body language, and re-assurance. In addition, as indicated by Ellen, she usually had little chance to talk to people; she said, “I talk to no-one. I’m scared to talk to friends because... nothing changes. If I talk with my parents, they will say ‘the telephone fee is really expensive.’ If I talk with my sister, she will say ‘sit in your room for a few minutes and you will get better.’” Hence, when she felt that she could safely do so, she made good use of the opportunity. The loneliness expressed verbally by Ellen was supported by her drawing. The Focus Group Interview method offered a safe and secure avenue for the participants, including those from NESB backgrounds, to express themselves verbally. In contrast, students had to express their feelings and to relate their experiences all alone in writing in the Open-ended Questions method. It is therefore not surprising that the Focus Group Interview method was more robust than the Open-ended Questions method.

Clarity
Clarity refers to the extent the theme can be unambiguously identified by the researcher. A method has high level of clarity for identifying a theme if the researcher could determine with little doubt the message that was expressed by the student. By its very nature, the Focus Group Interview method has inherently the highest potential for clarity in comparison to the other two methods; the facilitator could probe or ask
questions to clarify points in cases of doubt. The chances of probing was not available to the Drawing method nor to the Open-ended Questions method. Furthermore, drawings could involve a high level of abstraction, and parts of a drawing could have been included merely for aesthetic or expressive reasons, instead of for expressing particular themes. These more expressive or artistic components could reduce the clarity of the data. Figure 2 represented some examples of components in the drawings which had low level of clarity. In Figure 2a, the brick wall separating the outside world from the group of students and a teacher could mean protection offered by the school, or it could mean blockage to the opportunities outside of school. The curly personal figure in Figure 2b could mean a coiled-up inner-self or it could mean no outlets for the internal emotions. The sulky person in Figure 2c could be the student herself, or a parent, or a teacher. Unless the researcher interview the participants afterwards in relation to their drawings, some parts of the drawings could be ambiguous.

Insert Figure 2 somewhere here

Expressiveness
Expressiveness refers to the articulation and competence of the method in communicating information. Feelings were best expressed by the Drawing method, because of multitude of resources for expressions provided by drawings. Students made use of colours, icons, symbols, written words, size of figures, and placement of the elements to express themselves. For example, methods utilised to express the theme of stress in the drawings included: person with hair raising, increasingly dense stress dots, patch of red for rage and frustration, coupled with a blue patch for contentment, smily and sulky faces to denote swinging moods, a person sinking under water to denote the student was overwhelmed (Figure 3). These expressions were both creative and more colourful than the verbal representation of stress in the Focus Group Interview method. On the other hand, the Focus Group Interview method was relatively more expressive than the Open-ended Questions method. For example, stress was expressed verbally as get angry with myself, panic, Id kill myself, exhausted, crawled out of school, want to bury your head in the ground; these messages of stress were both vivid and clear. In comparison, stress was expressed in the Need friends to cope with pressures of school, so much emphasis on the HSC: everyone judges your intelligence from your results, or it is all about competing with other people, which were comparatively pale in their expressions.

Insert Figure 3 somewhere here
Utility

Utility refers to the consequences of the data collection method in its capacity to improve educational practice. Of the three data collection methods, the Focus Group Interview has highest utility in comparison to the other methods. It discovered more subthemes that are of direct relevance to the application of research findings to the betterment of school practices; for example, while the stress theme emerged from each sets of data independent of the method of collection, the Focus Group Interview uniquely identified coping strategies utilised by the students, and suggestions from the students on how the school and the teachers could help in managing and controlling stress. These suggestions included the provisions of relaxation skills and study skills to students at the junior years, and a wider curriculum with more subject choice at the senior years. Students needed reassurance from teachers that the teaching for the HSC could be finished in time. They appreciated a broader curriculum, one which addresses health and life issues, instead of only concentrating on the HSC. Students also requested information beyond the HSC. In comparison therefore, while both Drawings and Focus Group Interviews revealed expressions heavily dominated by HSC associated stress, the Focus Group Interview method was more constructive. The utility of the Focus Group Interview method is grounded on the solutions offered by the participants, and from the participantsí perspective. The usefulness of the Focus Group Interview method also rests on the unique discovery through this method regarding the under-utilisation of the school counsellor as a resource in managing stress.

With regard to the theme of friends, although all three methods discovered the studentsí reliance on friends, the reasons behind the importance of friends were discovered only in the Focus Group Interviews: Friends were always there, friends understand what you have gone through, they know me as a person. In comparison, teachers were not usually approached as a source of support because, they put us down, All they do is to tell you to study harder, There are some teachers who stand in the middle of the class and public speak to the class... Itís better if they ask students to participate. Parents were seldom approached as a source of support because they will bite my head right off, parents canít do the homework for their kids any more... itís just got too technical for them, my parents complain all the time... theyre really stressed about it. The utility of the Focus Group Interview method lies in the discovery of these reasons: Parents and teachers could be as accessible, understanding, and as caring as friends, only if they realise how important it is to their children and students.

Nonetheless, the most convincing evidence of the utility of the Focus Group Interview method came from the participants themselves. At the end of the study, when asked to comment on how this study had helped
them as they face the rest of their year at school, 22 of the 40 participants indicated specifically that the group discussion helped them to realise that they were not alone in feeling stressed. They wrote, I am glad to know other people feel the same as I do, ... and that you're not the only one to be a little frazzled by the teachers, It is nice to know what other people in the year is feeling about the HSC. It is good to discuss and see things from a different person's viewpoint... in the open., It is nice to know that other people are having similar feelings as me about schools, work, teachers, students, etc., realisation of other student's worries and problems. ... Finding that our opinions and comments are generally the same, a worthwhile experience and has enabled me to realise that I am not the only one experiencing difficulties in the crucial last year., was very helpful because we discussed many things that are dealt with the HSC. The Focus Group Interview method offered a safe avenue for Year 12 students to confidentially and openly share with their peers their feelings, concerns, fears, aspirations, and solutions to problems as they saw it. As such, this method is high in participant utility.

No remarks were made specifically on either the Drawing or the Open-ended Questions methods. These two methods were both rated as second in utility.

Whereas the sharing of opinions and experiences was valued by the participants, the study as a whole was perceived high in utility by the participants, because the study enabled them to put the HSC into perspective and to release some of the stress through the activities in the study. For example, they wrote: identify areas where I could improve, helped me to recognised ... whether the HSC is that important to future careers, know how to be strong and confident. How to work out my problems because this is the first time I really talk about it., for once I am telling someone about what I am feeling during Year 12., It has helped me to pour my heart out., boosted my self confidence and diminished some of the pessimistic views of failing an TER.

Method Efficiency
On the average, 10 minutes were spent on the Drawing method; 40 minutes were spent on the Focus Group Interviews, and 10 minutes were spent on the Open-ended Questions. Method efficiency in discovering the themes for the Drawing, the Focus Group Interview, and the Open-ended Questions methods were respectively, 1.1, 0.28, 0.9. Method efficiency in discovering the subthemes for the Drawing, the Focus Group Interview, and the Open-ended Questions methods were respectively, 8.2, 2.6, 4.5. These figures could be interpreted as: about 1 major theme was discovered per minute using the Drawing method. About 0.28 major theme was discovered per minute, or equivalently, about 3.6 minutes were required to discover a major theme, using the Focus Group
Interview method. About 4.5 major themes per minute, or equivalently about 1.1 minutes were required to discover one major theme, using the Open-ended Question method. Similar interpretations can be applied to the method efficiencies in discovering the subthemes. The analysis shows that the Drawing method is superior to the other methods in terms of efficiency, and the Focus Group Interview method is the least efficient method of all.

Discussion and conclusion

The literature often advocates utilising multi-method triangulation in qualitative approaches to safeguard validity. These discussions usually emphasise the concept of convergence; if there is corroboration of information from different methods in the same study, then the study is claimed to have high levels of validity. For example, Wiersma (1991: 232) wrote, Basically, triangulation is comparison of information to determine whether or not there is corroboration. It is search for convergence of the information on a common finding or concept. To a large extent, the triangulation process assesses the sufficiency of the data. Hittleman and Simon (1992:196) said, One procedure used by qualitative researchers to support their interpretations is triangulation, a procedure for cross-validation information. Triangulation is collecting information from several sources about the same event or behaviour. The study reported here made use of three methods of data collection: Drawings, Focus Group Interviews, and Open-ended Questions. To a certain extent, corroboration can be interpreted as the flip side of uniqueness. This study has found very low values of uniqueness for all methods. Of the twelve major themes discovered, two were identified by only one method, corresponding to a uniqueness of 1 or no corroboration; one major theme emerged from the analysis of data from two methods; the three data collection methods were in corroboration of the remaining nine major themes. The researchers can therefore confidently believe that stress, friends, the HSC, the self, the future, teachers, parents, the school, time, and the family, as defined by the participants represent important facets of the school life of Year 12 girls. One hypothesis to be tested perhaps by follow up research is that, the school counsellors, who were uniquely identified, and poorly portrayed by the Focus Group Interview method, were omitted from the drawings and from the responses to the Open-ended Questions because school counsellors were never considered by the students as a resource for dealing with stress, nor as a significant aspect of the studentsí school life. On the other hand, the theme of books identified by the Drawing method might merely be a symbolic representation of stress, instead of an independent facet of Year 12 girlsí school life.

There is nevertheless another important rationale underlying the method of triangulation, and that is, the inadequacy of any single method to represent the complex human behaviour. Triangulation aims to map out the richness of information regarding the phenomenon under study. As Denzin (1990) has put it, iThe social world is socially constructed and
its meaning is constantly changing. As a consequence, no single research method will ever capture all of the changing features of the social world under study... For those reasons, the most fruitful search for sound interpretations of the real world must rely upon triangulation strategies.

This study substantiates Denzinís argument that each research method only represents a different interpretation of reality in that none of the methods employed in the current study is 100% comprehensive. Each method represents only one slice of reality. However this study revealed that the three methods are not to be weighed equally; the same theme is being expressed with different levels of clarity by different methods, and the same method expresses more clearly some themes than other themes. The methods also differed in their robustness, potential for data expressiveness, and in their utility. As far as school life of Year 12 girls is concerned, this study indicates that the Focus Group Interview method is the most effective and yields best quality data amongst the three methods. It capitalises in the support of the group dynamics. The Drawing method is most efficient and most expressive of the three methods. It also involves least interrogation. Open-ended Questions method is the least preferred method according to most of the criteria employed in the study. Nevertheless, the Open-ended Questions method uniquely discovered 5 subthemes: studentsí appreciation of the teaching by their teachers, the parents never offered any praise, self confidence, boosting self esteem, and the understanding of oneís potential. As the building up of the self image is an important component in adolescent development, the Open-ended Questions method therefore can still make a valuable contribution to the understanding of the school life of adolescent girls.

Table 1Themes and Subthemes identified in the study

Table 2.Comparison of three data collection methods across all criteria

References

England: Pergamon Press.


Appendix 1 Definition of Themes identified in the study

Theme Definition by the participants
(Words in Italics were interpretations by the researchers)

Stress/stress; stressed out; stressful; pressure; too much pressure; pressure is unbelievable; stress is incredible; (the words 'stress' and 'pressure' were used repeatedly by many students); scared; scary; horrible; the fear from within; fear of failure; panic; fear; afraid; worry; overloaded; anxiety; unsecure (sic); frustration; depressed; sick of it; anger; get angry with myself; rage; feel guilty; gain weight; overeat; I'd kill myself; tired; sick; exhausted; flustered; just dead; crawled out of school; sad; tears; get really upset; feel terrible; cry; upset; moods swing; good and bad days; locked in; regrets; I really want to talk to someone; no one really understands; I don't get anyone to help me; there is nothing else I can do; unachievable; impossible; hopeless; really difficult; problem; struggle; no sleep; drop out; shock; amazing; you just want to bury your head in the
ground

HSC TER; HSC; examination; marks; results; assessment; too much emphasis; dominate our lives; reminded by teachers everyday; be all and end all; not relevant; I don't need it for what I want to do; determines whether I am able to do what I want at university; you fail... and there goes your whole life down the drain; I'm not truly depending on my TER; HSC is becoming stressful for any student; but we keep forgetting that the HSC is the end of the world; has become a hassle and seems to be worthless; I don't even know why I'm doing HSC; everything is directed towards the HSC; not really a test of intelligence but more of a test of your memory; TER: I panic about it; HSC: fear panic; HSC: too much pressure; stressful; awful; depressed; need to beat 90% of the State; HSC = stress = non sleep = gain weight = no social life = hard work = mood swings = chocolate = unsecure = regarding how good we really are; no matter what marks you get it is not good enough (represented as a cross); (students provided the TER scores they expected at the focus group interview which ranged from 60 to 99)

Friends
friends are the best ones; I usually tell my friends; close friends at work; the only thing I'll take with me is my friends; my role model; good strong relationship between our peers; I'll go to my closest friends and ask them; go to friends for sure; boyfriend; couldn't survive without; revolves around friends; don't know what to do without friends; is the most important aspect of school; possibly the only incentive to come to school; provide the maximum input of motivation and encouragement; are there to help; support; and keep us sane; support; who will listen; help; boost up my self-confidence; always there; understand; in the same position; relaxing and comfortable; understanding; they know what you're going through; keep the friendship after graduation

Appendix 1 Definition of Themes identified in the study
(Continued)

Theme Definition by the participants
(Word in Italics were interpretations by the researchers)
Self I'm lazy;
very lazy; too lazy; dumb; slack; hopeless; unmotivated; down the bottom; below average; I'm not that intelligent; I'm probably the most unmotivated person you'll ever meet; I don't think my study skills are good at all; I set high goals - maybe too high; I could get a good mark if I worked; I'm not sure what mark I expect; I'd like to do ...; I'd like to go to uni; I'd like to do well; I'd like to get 90 but I don't think I will; I should be getting really good grades ... but I don't think I will; I think that's a bit optimistic the way I'm going; I know I'm not going to get the marks; now I've hopefully get my acts together; I need to be independent; I try to do things myself; I just keep it all to
myself; I really put pressure on myself; I should be self-motivated; I should be doing more study; you need re-assurance; you need to know that you can do it; we're all ready to go to uni - why do they treat us like children; I don't really know what to expect of myself; I'm too young for all this pressure; I don't really care

Future uncertain; ??
HSC then what?; what happens after HSC? confused; is everything necessary for later life? You're going to get out of school and then where do you get help? TAFE or Uni? TER: Pass/Fail? excitement and mystery; I'm not really sure; there are just too many things; I still have no idea what I want to do; I really don't know what I want to do; it's impossible; difficult to face the future; there's no jobs; I don't get to study - I'll get a job; I'm going to bomb out; without education you get nowhere; end of an era; end of school life; the only thing which keeps me going is finishing

Teachers most are good; teaches you a lot; can rely on teachers to help; give advice; they'll go out of their way to help; friendly, co-operative, understand; just about every teacher takes a real interest; take the time to help; helped me get more confidence in myself; get you interested and excited; one of my teachers... makes us think for ourselves and have our own opinions; they really do care; some... are close to you; certain teachers teach you important things; year co-ordinator is really good about careers; year co-ordinator really good... she says 'I am here for you'... really terrific; sometimes I can get a practical solution... from a teacher; most of my teachers are really good and helpful; negotiates and understands; I won't go to teachers; I don't go to teachers because they think that I'm not coping; some... don't do anything; some are unrealistic; some... do little in a class; some just come because they want their week's wages; I don't see teachers motivating students; where is the quality check? you can't rely on the teacher because half of the time they're wrong; can't trust all teachers; teachers should be broader than just care on the HSC; HSC is not the be all and end all - teachers believe it is; I wish teachers will get a life sleep; you don't really go to teachers... they don't really help; they try to help but there's not much they can do; I am not sure if they are prepared/trained to get us through the HSC; teachers are so qualified and know so much that it is hard for them to express their knowledge; teachers give me hell; teachers nagging for HSC; teachers who aren't performing shouldn't have a job; teachers just teach the elite; they are too distant;

Appendix 1 Definition of Themes identified in the study
(Continued)

Theme Definition by the participants
(Words in Italics were interpretations by the researchers)
Parents they
are the people I trust; they help me to study; go to mum for advice;
they say édo your best and whatever mark you get, you can always do
something with ití; never pressurise me; they say édo your bestí; they
say éitís up to youí; arenít pushy; they do sympathise; high
expectations; always complaining; they get totally stressed; they get
upset; my parents think Iím lazy; always telling me I donít do enough
work; always nagging; they are on your back all the time; make me feel
guilty; they donít understand; they donít understand the stress; never
listen to me; never praise you; just want you to be perfect; they say
écouldnít you come first?í; I havenít really discuss with them; I donít
talk to them about the pressure; they donít have any input in my work;
doesnít take much of an interest; I donít think they really care about
what I do after HSC; they donít have anything to do with my work; they
compete with their relatives

School counsellor or she is a mother figure;
came and spoke to us... it really calmed us down; arenít helpful;
doesnít help; Ifive never been to; I tend to go to someone else; careers
guidance a problem; she just talks about us behind our backs... If you
ever want to talk to her, about personal things... but it just spread;
she hasnít got the experience; no one at school can help me... also
itís not confidential; I just wish I had had more advice; I didnít
really know what I was doing when I chose the subjects; itís like going
to a stranger; doesnít listen... she doesnít hear... canít give you
answers; no one sees her... real scary... all hidden... dark little
corner; sheís never there... a stranger; no help at all; didnít tell us
other fields; like a joke; unapproachable... really awful; you thought
you could trust her but you couldnít; really hard to talk to.

School stop
you thinking for yourself; we are not prepared; waste so much time in
junior years; Year 7 and 8 are bludge years... encourage them to think
more... donít spoonfeed; leave it a bit late to discipline you in study
habits; should prepare you better in Year 11; they didnít explain
clearly enough when we were in Year 10; in Year 10 didnít give us a
ture idea about the HSC; study skills too late; most of us are sick of
school... Ifive had enough; everyone is so negative about school; sick
of it all ... so repetitive; subjects are not relevant; still (need to)
have a social life; donít think éXí department is up to standard; éXí
department: results are shocking; they donít teach you like real
people; not even a quiet place to study during study periods; need to
foster the ëpleasure of learningí instead of to achieve for the HSC;
needs to be an overall building up of a positive attitude; need for
relaxation skills; important to learn how to study; better exam
preparation needed; they donít really show us what we can do after
school; not happy with subject choices; they say university is the only
option; they put you down a lot here; itís all academic - not enough
sport; need a better sport program; not adequate; shouldnít leave out
those who are not academically-minded; thatís where you learn about
AIDS and all sorts of health issues

Appendix 1 Definition of Themes identified in the study (Continued)

Theme Definition by the path findings are not mere artefacts of the particular method of data collection? Several strategies have been recommended to safeguard authentication. One strategy, called methodological triangulation or multi-method triangulation (Miles and Huberman, 1984: 231-43), which means the utilisation of more than one method to collect data, will help to resolve the issue of method-boundedness. If several methods of data collection yield substantially the same results, then the researcher could confidently claim that the results are method independent. However, having considered employing multi-method triangulation, the researcher is still confronted with the question: which methods are to be selected? The present study attempts to contrast three methods of data collection, comprising focus group interview, drawings, and open-ended questions, in terms of their relative effectiveness in eliciting relevant data.

METHODS

Samples
It has been decided to restrict the study to the context of the research on the school life of adolescent girls. The participants of the study consisted of forty Year 12 girls in four metropolitan secondary schools in the Sydney's North and South-West regions. These girls were volunteers, and were recruited at the end of a previous study on school culture, which involved 30 Sydney schools and 2615 Year 11 students six months prior to this study (Mok, 1994). Both the schools and the students gave informed consent to the study. Thirty-two of the 40 participants were born in Australia, and

(Words in Italics were interpretations by the researchers)

Time had no
time to study; never enough; no time; no spare time; having to meet deadlines; (time was represented as clock faces in 3 drawings and as a calendar in one drawing),

Books (books were represented as opened books, in piles, in stack, disproportionately huge in size, everywhere in the room, on shelf, held by the student in the drawings.)

Food chocolate;
Cadbury; living on chocolate; food; overeat; eating problems; coffee; coffee addiction; (picture of canteen);

Family I ask my sister for help;
brother is in Year 8... has more responsibility than I do; the whole family is so busy, their lives are so busy and my life isn’t that important that they should get involved; I spend too much time away from my family; brothers and sisters sitting around doing nothing; they’re shock... like homework is foreign; will refer to my sister... she has gone through the HSC; compared to my brother who didn’t do much; compete with (my) brother with did HSC last year; turn to friends and my sister first; compete with my sister; better than my brother who is slack; my grandmother told me I was disappointing her and the family;

Competition  compete with my sister; comparison with other schools; depends on the people I compare with; compare to other private schools, we do so much less;

Other schools & students our education system is behind other ones in the world; wish would keep up with other schools; we are at a disadvantage; compared to other schools ... our school isn’t really good in the level of education; they (Asian students) just work, work, work... they never mix with us... they always reading 4 Unit math; private schools have longer holidays so they have to work harder;

A comparison of 3 data collection methods:
focus group interview, drawing, and open-ended questions
Magdalena Mok & Kerri-Lee Krause
School of Education, Macquarie University

Abstract
This study involves a comparison of the comprehensiveness and data quality of three data collection methods. The methods are: focus group interviews, drawings, and Open-ended Questions. These methods were used in the same session to elicit responses on the school life experiences of adolescent girls. The participants were 39 Year 12 female students from four NSW secondary schools. The students were interviewed in groups of 4 to 6 for about an hour in their respective schools. At the start of the interviews, each student was asked to represent their school life experiences diagrammatically on A3 paper, using drawings, words or symbols. Then, facilitated by the interviewer, the students were encouraged to share their experiences of school life with the group. The conversations were tape-recorded. The students could add to their drawings during the discussion. At the end of the interviews, students were each given Open-ended Questions on their school life. Results from these three methods of data collection were separately content analysed for themes. The data collection methods were compared for the comprehensiveness of themes, and for data quality. Major findings included: (1) The stress associated with the HSC examinations was the dominating theme for both the Drawing and the
Focus Group Interview methods; (2) Focus group interviews identified more themes than the other two methods; (3) The students' drawings offered a depth and quality to the data that is perhaps not easily achievable using the other two methods; (4) The Open-ended Questions was the least effective of the three method