# A Qualitative Inquiry into Students' Management of Learning: Interpretation and Trustworthiness

**Dr Viola Wong Yuk-Yue**
Assistant Professor
The Hong Kong Polytechnic, English Language Centre
Hung Hom, Kowloon, Hong Kong
E-mail: ecvwong@polyu.edu.hk, phone: 852-27667646

## Abstract

*This paper shows how 'interpretation' shapes a qualitative inquiry into Chinese students' management of learning at university. The methodology and methods adopted in the study to examine students' management of their learning are described in order to provide information for an appreciation of the role of interpretation in qualitative data gathering and analysis. Interpretation constitutes a large part of the study – from defining problems and aims, generating and marshalling relevant data as facts, to examining the data to arrive at an understanding and giving meaning and significance of what has been examined. This paper elaborates on the points taken into consideration when establishing the trustworthiness of the study process. It shows how interpretation could be an 'enabler,' empowering the researcher to make sense of what she was studying and to capture the myriad multiple realities in the quest for understanding.*

**Keywords:** interpretive paradigm, grounded theory methodology, learning approaches

### *(1) Introduction*

In order to obtain a clear understanding of how a group of university first-year students learns on a formal programme, a case study has been carried out. The emphasis is on interpretation of context rather than on generalizations across contexts. The students' experiences are studied in relation to their perceptions of learning. The aim is to understand how the students perceive and manage their study at university, thus shedding some light on the direction that an educational paradigm should take in order to equip students with the knowledge and skills they need to face the changing world.

### *(2) Research Design*

The main research question is: How do students at a university in China manage the process of learning and study? This research study captures students' perceptions about their management of learning. Factors that influence perception can reside in the perceiver, the perceived and the context of the perception (Robbins, 2000). The study was guided by the ontological and epistemological assumptions in the interpretivist research paradigm, which maintains that concepts and methodologies are appropriate only within a restricted or specific cultural setting, and that there are multiple realities, depending on whose viewpoint the researcher is soliciting (Denzin & Lincoln, 1994).

The interpretive paradigm was used to seek situated and situational understanding to illuminate the learning setting under consideration. This paradigm was believed to be especially suitable for the interpretative orientation of the present perception study because it can provide a sophisticated research strategy to obtain the contextualised nature of experience and action. A person's attitudes, personality, motives, interests, past experiences and expectations can influence his or her interpretation of what he or she sees. The characteristics of what a person sees and his or her context (such as time, place and other physical attributes of the location) will also affect his or her perception. Issues, questions and problems in the qualitative research paradigm can then be framed in terms of the functional meaning for the participants in the study. Since grounded theory approach embraces the assumptions of the interpretive paradigm, the methodology that this case study has adopted is grounded theory methodology.

### (2.1) Grounded theory methodology

Grounded theory methodology employs an inductive/deductive approach and constantly refers to the data for concepts and their interconnections. Theoretical sampling (based on theoretically relevant constructs) is used in data collection (Strauss & Corbin, 1998). At an earlier stage, more open sampling methods are used to identify individuals, to assess data relevance to the research and to categorise concepts generated at this stage. A more systematic relational sampling is then used with the aim of locating data related to the categories of concepts generated at the earlier phase or that are confirming their relationship. Discriminant sampling is employed at a final stage of data collection in which individuals will be selected to verify the core category. Memos are kept for the whole process of data collection to illuminate the inquiry process.

Data analysis consists of three overlapping processes: open coding, whereby concepts of data are abstracted to facilitate identification of categories; axial coding, in which categories are substantiated or further developed; and selective coding, when a central or core category that correlates all other categories is identified.

### (2.2) Data Collection and Sampling for the present case study

Data were collected from individual interviews, focus group interviews, and diaries. The procedures for individual semi-structured interviews followed those mentioned in the literature (e.g. May, 1993; Seidman, 1998). As expected in the grounded theory approach, issues discussed, questions raised and matters explored in the semi-structured interviews changed from one interview to the next as different aspects of a topic or even different topics were revealed in interviews. Semi-structured (with only minimum guidelines) individual interviews were conducted with the students participating in the study. Conversations in the interviews were aimed at generating free-flowing information exchanges related to the students' 'real' reality. Open-ended questions were used to enable the students to express themselves on their own terms and in their own terms of reference. Probing and cross-checking techniques were employed to check the accuracy of the researcher's understanding and perception of the students' perceptions, attitudes or views. To enhance the strength of the data, research procedures were carefully documented (through field notes and memos) to include details of how and why the researcher made certain decisions in the process, the observations she made during the interviews and the way she collected and analysed the data. The following shows examples that illustrate interview questions and their derivation from the research question: How do Chinese students at a university in Hong Kong manage the process of learning and study?

#### (2.2.1) Interviews

Interviews 1 and 2 constitute the initial stage of data collection, the objective of which was to define the topic area in more detail and to generate some ideas around the key learning issues for first-year university students. In order to acquire the information required for the study, interviews were unstructured but focused upon two questions: What does learning mean to you? How do you feel about your studies? Students were prompted for explanations, elaboration and clarification when or if the researcher believed there was a need to do so.The common themes in the first two interviews were effort, expectation and attitude. The mood of the responses was marked by a cautious overtone as the students were not always certain about their prospects at the university. In general, the students were happy about having been admitted to the university; nevertheless, they had concerns about their English proficiency, their ability to handle their studies, their teachers' expectations, peer competition and the effects of studies on their social life.

The analysis of the themes and moods in Interviews 1 and 2 led to several decisions about the type of data to seek and to ask in Interviews 3 to 6. For example, in order to probe students' cautious mood, the researcher asked them to describe one or two memorable classroom or self-study experiences in their first two months of study in the programme 'English for Academic Purposes'. In the first two interviews, students attached the importance of effort to learning, so the researcher decided that the following interviews should explore the topic of effort and perceived achievement. Since the interviewees also alluded to expectations of how they would like to be taught, the researchers used the next few interviews to continue exploring those expectations.In order to understand the issues identified in the first two interviews, Interviews 3-6 adopted a more standardised approach in terms of the questions. At the same time, the interviewees were encouraged to answer the questions in their own way. For example, when interviewees were asked about how they would like to be taught, there were four types of descriptions: general perceptions of good teaching, perceived experience about learning, assumptions about learning and practising learning strategies.

The descriptions reflected what the students read into their learning experience and how they drew upon these experiences to convey their views about their learning. The researcher was aware of the need to improve her theoretical sensitivity. With this objective in mind; she constantly re-read the data and coding from the previous six interviews. With Interviews 7 and 8 coded and concepts incorporated into subcategories, the resulting category items were sorted out and concepts were radically re-arranged because of the emergence of some new key ideas. Two major categories emerged: comprehending the learning environments and handling studies. After coding and extensive memoing for Interviews 9 and 10, and sorting them into subcategories, a student typology began to emerge. Extensive memos were more focused on students' relationship with the learning environment, perception of task, role and daily study practice. No new concept categories emerged in Interview 11. The researcher re-consulted the data previously generated to see if there was a possibility of refining the conceptualisation of the emerging theory. Property development of categories and sub-categories began to slow down in Interviews 11 and 12. The three types of study traits and behaviour that pertained to the tentative labels of reactive, adaptive and generative approaches were the subject of extensive memoing in Interviews 9, 10, 11 and 12. By Interview 13, the researcher concluded that the saturation point had been reached for the whole process, as no new concepts or dimensional properties were recorded.

### (2.2.2) Focus group interviews

Apart from individual interviews, focus group interviews (as an aid to interpretation) were carried out to deepen and enrich the understanding of group meanings of some areas of learning and study habits. Group interaction in focus groups can produce data and insights that would be less accessible without the interaction found in a group (Morgan 1997). Focus group interviews are suited to the study of students' attitudes and experiences, and to the ways in which students' points of views are expressed and constructed (Barbour & Kitzinger, 1999; Krueger, 1994). The group interviews were follow-ups to the individual interviews, revisiting some of the questions asked earlier, clarifying issues that emerged in the interviews, eliciting further information or extracting more data relevant to the study. In individual interviews, most students mentioned seeking assistance from teachers in aiding study when they were asked about how they managed difficulties in their studies. They described their personal experience in terms of behaviour and usual practices.

One further question that the researcher asked was the importance of teacher assistance in their study. In the focus group interview, seven students (who were interviewed earlier) exchanged their views. Three aspects of teacher assistance emerged: teachers as authorities; teachers as friends; and teachers as working partners in a study programme.Students cited their experience in some learning tasks, answered questions from other group members, and discussed their attitudes toward learning and their beliefs about formal teaching. The researcher made sure that no one in the focus group meeting imposed his or her ideas upon the other group members and that all of the participants had a fair chance to make their views known. The researcher did not participate in the discussion, allowing the interaction in the discussion to take its natural course. She only interjected topic questions when she believed that the aspect the student was discussing had been sufficiently explored.

### (2.2.3) Journal keeping - journal entries

In order to gain more insights into the complex issues and processes involved in learning, students' daily journal entries of their learning activities were consulted. Management studies have found that personal journals or diaries have been recognised as a very useful and insightful information source (Symon 2004). In this study, diaries were used as a source of data because they allow less obtrusive access to daily behavior and can capture experiences immediately as well as revealing less obvious events. Students kept detailed diaries for a week at a time for three weeks (beginning, middle and toward the end of a 14-week semester). Diaries showed the students' learning and study practices, the problems they encountered in learning and the efforts in managing these problems.The following journal entries were taken from a student's journal at three points in a 14- week semester: at the beginning of the semester (Wednesday in Week 3), in the middle of the semester (Wednesday in Week 8), and toward the end of the semester (Wednesday in Week 13).

**Week 3**. Wednesday. Did not do much about English today. Homework just about filling out the blanks. Did two web-tasks. Do not understand some of the answers. Perhaps need to ask the teacher tomorrow but don't know if I can see her. Wanted to continue the story I read last week, but did not feel up to it.

**Week 8.** Wednesday. A lot of English homework to deal with. I drafted my essay for submission next week. Still don't know if my style is correct or not. Couldn't find my teacher in office today. I left her a note saying I would go to see her tomorrow. Surfing the Net for some materials for my oral presentation topic. Many materials but don't know what to give to teachers. Again, I need to ask her tomorrow. So many questions to ask my English teacher – had better make a list.

**Week 13**. Wednesday. Went to CILL to practise my oral and asked a couple of questions at the Help Desk there. I'm going to do my presentation next week. A bit scared. I need to get at least a 'B' in order to receive an average score of 'C' for the English subject. Rather difficult to get a 'B' in oral presentation. Already done a couple of rehearsals in front of the mirror. Still get stage fright. Found turning an outline into sentences for delivery very difficult. Don't know if the teacher will teach us more of such skills tomorrow or not.

These three excerpts show the student's increasing anxiety over his performance in the programme, the importance of his teacher's guidance and the effort he put into the programme. His concern about the programme was obvious. The journal entries allowed the researcher to track the student's developing responses toward the programme.

### (2.2.4) Sampling and selection

A combination of purposeful sampling techniques (Patton 1990) was used: maximum variation sampling, snowball or chain sampling, and confirming and disconfirming cases sampling.

Maximum variation sampling enabled the researcher to document numerous variations that had emerged in the research process and identified some common patterns that cut across students of different backgrounds, capabilities and personal preferences in relation to learning/study management. Since the present study focused on students, the researcher identified good examples for study or information-rich cases from the students themselves through snowball sampling. Student interviewees were asked to identify other students from whom the researcher could extract or generate rich data. Confirming- and negative-case sampling was also used to elaborate and deepen analysis to confirm, disconfirm or to clarify emerging issues. The sampling and selection process was a recursive, dynamic and ongoing process. Selection of subsequent interviewees was based on what was found in the research process. The students selected for this study were not restricted to a particular discipline but came from a range of departments that could enrich the context for analysis. Sampling and selection would end when the category system in the analysis process reached saturation.

**The following are samples of notes made by the researcher on the 5th and 6th interviewees to give a brief glimpse of how students were selected. ('S' stands for student.)**

**S5** (a Nursing student – with a different learning experience from **S4**) He was invited to come in for an interview because of his experience in studying overseas. He studied abroad for a short period of time (one year). He seemed to enjoy his studies overseas a lot more than university life in HK. When talking about his experience abroad, he seemed to glow with pleasure and a certain amount of pride. He was generous with his opinions about what learning is and his views on what he thought to be two different educational systems. He had a strong belief in the value of critical thinking and interest in learning.

**S6** (an Applied Biology student. A student living in the Residence Hall of the University was invited to the interview for a comparison in study habits.) S6 came across as a pleasant and independent girl. She was conversant in English. A bit inhibited at the beginning of the interview but was ready to volunteer information from the mid-session of the interview onward. She seemed to have clear goals in her university studies. She believed in hard work and thought she could have done better if she studied harder. Since the interview was held in the early part of the term (Week 4), it was doubtful whether any discerning study habits regarding hall life could be available. Yet, S6 managed to shed some light on how residence students might deal with their studies.

Since the core category concept was starting to emerge by the end of the sixth interview, the researcher attempted to include students from as many disciplines and backgrounds as possible for the purpose of identifying more moderating variables and hastening the progress toward property saturation.

### *(3) Data Analysis*

Synchronisation of data collection and analysis took place for a period of four months while the students were completing their programme 'English for Academic Purposes'. Data analysis was an ongoing process that accompanied and was supported through the continuous gathering and generation of data. Patterns and themes identified in the analysis became categories for both coding and categorising the data. Apart from data fracturing, reflections on the richness and spontaneity of the interview responses were made throughout the research process.

#### (3.1) Coding and Categorising

Microscopic analysis was performed on the manuscripts of the first few interviews to get at the specifics of data and the interviewees' perspectives and interpretations of certain events. Ideas were extracted and coded (or labelled) from the data that were generated from answers to who, when, what, why and how questions. These questions clarified the meanings and concepts. Relationships among these concepts were then extrapolated from seemingly unruly details in the process of conceptualising and classifying the events that were discussed in the interviews. Classifications of concepts became the categories that were further developed according to their properties and dimensions in the subsequent interviews. Memos were made to record the observations, analyses, thoughts, feelings, interpretations, implications, as well as questions and directions for data collection and generation in future interviews. The following are details of the coding steps of the study.

#### (3.2) Open Coding

The open coding stage was an initial category building stage. At this stage, identifiable units of meaning were coded into conceptual categories to yield preliminary topic categories. The following is an example of code notes at the open coding stage. The notes were taken from the second student interviewee.

**Code notes on an interview transcript about views on learning -- interview transcript with coding in brackets**

Sample Coding

I think learning is about something new, something that you need to know in order to finish a task [*acquiring skills*]. Learning different things require different ways to learn [*different strategies*]. For example, you learn a science subject differently from the English subject. Learning takes time – I mean it's difficult to say one has learnt something without spending much time on it *[time needed*]. Learning is not an easy thing, especially if you want to learn well [*effort needed*]. I spent a lot of time on the English subject; still I failed in my English exam [*effort and result*]. I know I need to work harder [*effort and attainment*]. Good students are hard-working and achieve good results [*value of hard work*]. But of course some students are smarter than others or more capable of learning new things [*individual differences*]. Memory power plays a very important part in learning [*close relationship between learning and memory*]. If students have a good memory, they can remember what's been learnt easily and they easily score high marks [*memory and attainment*]. I think all students who are top in the class have very good memory because they can easily remember what they have learnt and reproduce it in exams [*memory instrumental in learning*]. I wish my memory power could be better [*emphasise personal belief in memory*].

This open coding process yielded preliminary topic categories. These categories were then recoded in a process called 'axial coding' (Strauss 1987).

**(3.3) Axial Coding**

The next step after open coding was to propose relationships among the categories. Strauss and Corbin's (1990) paradigm model for linking previously established categories was used. The paradigm-model approach identifies related phenomena, causal conditions (which give rise to the phenomenon), contexts (in which the phenomenon is embedded), facilitating or restraining conditions (or the intervening variables or conditions that have bearing on the strategies taken), action/international strategies (which are used to manage the phenomenon) and consequences of actions (which are the results of the actions and interactions). An example of an axial coding theoretical memo on 'dealing with challenges in a written task' is shown below. It depicts the efforts made by students to complete their assignments on the English subject. Students' problems with completing the written task ranged from unclear instructions to inadequate skills and competence, to emotional anxiety about the prospects of having to deal with the task itself.

**An example of axial coding**

Causal condition Students were given an out-of-class written task.

Phenomenon Students strive to deal with challenges posed by a written task.

| Properties of the problem | Specific dimensions |
|---|---|
| Response to the task | intensity |
| Nature of the task | difficulty and manageability |
| Skills / knowledge required | scope |
| Judgmental elements | degree of perceived fairness |
| Congruence between teaching & learning | extent |
| Assessment focus | clarity |

Context for problem. It was the first written task in an English programme, a mandatory programme at the university. Some students did not have confidence in writing and some found the writing task somewhat daunting, as they said they had not written in English for almost half a year.

Action/interaction strategies for managing the problems related to assignment. Evaluating the odds and urgency of situation; weighing alternatives or options; consulted teachers; went to extra classes on campus or tutorial school; initiated study groups; asked for assistance from classmates; looked for relevant information on the Net; talked to friends or family members.

Intervening Conditions. Previous learning experience; student-teacher relationship; relationship among peers; teacher's perceived expectations; students' own expectations; students' personality traits and preferences; students' capability; students' clarity of focus; perceived organisational learning culture.

Consequences. Followed closely guidelines and instructions; adapted to new ways of learning offered by university or advised by teachers; explored new ways to learn to suit individual needs.

As can be seen from the example, the categories were linked by means of the paradigm-coding model, which helped the researcher to collapse some of the categories generated at the open coding stage and produce more comprehensive topic categories. The six topic categories arrived at after axial coding were: making sense of the context, making use of resources, individual differences in learning, being a learner and 'experts' in the making.

**(3.4) Selective Coding**

The last procedure is to identify the core category and to integrate the other categories into it. This is done by first developing a story line (Strauss & Corbin 1990) as in the following example.

**An example of a selective coding memo**

The core category: Patterns of relationship between characteristics of adopted study approaches and reliance on assistance

The story: The students seem to use strategies or approaches that they are most comfortable with. The students who believe in the importance of following instructions to produce 'good' work tend to adopt a more compliant approach in learning. They are committed to their studies, spending a large amount of time on completing the assigned tasks. Their commitment is marked by punctual task completion, priority given to rules and regulations and attention paid to classroom teaching. Some students are not just spending time and energy on what has been received in the classroom or from their teachers. They put more emphasis on making use of the facilities and resources in the immediate environment to improve their learning. Their concerns are with solving their own problems while tackling learning tasks. They consult their teachers for advice. They prefer clear guidelines, but not close guidelines; they will ask not just what to learn but also how to learn. Teachers are just one of the 'learning resources'. This group of students prefers flexibility in learning and exhibits more traits of being personally engaged in their own studies. The third group of students is distinguished from the rest of the students in the fact that they display a greater interest in their studies. Much of the reported study practice has shown integration with daily routine. Enjoyable, interesting, good progress, not difficult, useful, feel good – all of these are indicative of students' affinity for the subjects they are studying. Study group meetings could be a 'highly interesting social event'. A theory related to variation in dependence on resources, peers and teachers in the process of managing one's study could help describe and explain the different study approaches.

The researcher then went back to the data and questioned the role of all the existing categories in the students' management of learning. Axial coding interrogations of the data were performed again, focusing on possible linkages between categories and the way the categories can shed light on the 'story' about the seemingly central phenomena of the study at this stage – being a learner and experts in the making. Some categories and subcategories were collapsed, re-arranged or considered as outliers to be dropped later. Discriminant sampling was then carried out to refine the story told by the core category and the relationship between a new set of categories. Conceptually broader and more relevant labels were then used for the new set of categories. This procedure yielded two major themes: comprehending the learning environment and handling the study. Two notional categories (learning contexts and learning assumptions) emerged under the theme of comprehending the learning environment, and four notional categories (task perception, role perception, sense of responsibility and study management process) were generated under the theme of handling the study.

Once the categories in the framework were settled, each of the categories and the relationships between them were fully developed. With the identification of the six notional categories, for example, attributes of the phenomena emerged in the study were then located along a qualitative continuum. Interviews 8, 9 and 10 provided a considerable number of illustrations for the categories and development of properties of the categories to help flesh out the storyline at this selective coding stage. By Interview 11, no additional categories could be identified and property development for the various dimensions of the categories began to slow down. Both Interviews 12 and 13 witnessed a lack of further conceptual development for the building of a theory concerning students' management of learning. It was then decided that the procedure had reached saturation. By constantly re-consulting the data generated in previous interviews when attempting to fill in and refine the storyline, the researcher discovered three pervasive conceptual themes, which ran through the notional categories – the reactive, adaptive and generative study approaches.

Table 1 in the appendix depicts the matrix of themes and notional categories. The coding process helped with the labelling of concepts that capture the meaning of phenomena (such as issues, problems and events) over the course of investigation and data analysis. Through the coding process, the researcher gained an understanding of the nature and types of relationships among the categories of concepts. Along the lines of properties and dimensions, categories were related to subcategories, giving depth and structure to the categories, highlighting variations in conditions and consequences, actions and interactions in the phenomena (Strauss & Corbin, 1998). Categories and sub-categories were then developed to the point of saturation. Finally, a central idea was selected and explanatory statements were made of the relationships of the rest of the categories to the central idea to give a coherent story about what was happening.

### *(4) Practical Issues*

#### (4.1) Stance and Position of the Researcher

The researcher asked her colleagues to identify suitable students who were willing to participate in the study. The students were Chinese students who were in their first year at the university. Since this was a piece of insider research, only a few major problems with data gathering were encountered. However, the fact that this was insider research makes this study vulnerable to undue bias and result in students being unwilling to express their true opinions and selves in interviews.

In an attempt to resolve these problems, the students selected for the study were not the researcher's own group of students. However, no matter how much the researcher reiterated her intention to be regarded as someone other than an authority, the students might still have had doubts. First-year students' cultural conceptions about legitimacy as a social encounter in an interview with an academic staff member also raised doubts about their willingness to express freely. The researcher understood that she was the primary instrument for data gathering and analysis. She found that her professional affiliation with the organisation she was studying had contributed to her theoretical sensitivity and her ability to conceptualise from the data generated in the study. She understood the learning and teaching environment, which gave her a context within which conceptualisation took place. Since grounded theory approach is concerned with the participants' subjective views and actions, and the researcher's interpretation of such views and actions, the researcher realised that it was important for her to guard against the effects of potential bias that may result from her own value system, life and work experiences. Guba and Lincoln (1989) suggest explicitly acknowledging such possible biases. Belgrave and Smith (1995) contend that all of the researcher's beliefs and values should be made explicit so that readers of the study could have a clear understanding of the context in which the research has been conducted.

By so doing, both the researcher and readers had a context in which to place the interpretations and methodological choices. It is believed that explicit acknowledgement of biases could reduce the effect of potential bias and improve the perceived objectivity of the study.In order to lay open the issue of potential bias, the researcher would like to describe her views, beliefs and experiences. The researcher has taught Chinese students for more than 20 years at the university – the site of investigation. She was brought up in an educational system that was very similar to that of the students. In addition to teaching, she helps run study programmes at the university and she has instructed different types of students. She has formulated her own teaching and learning philosophy over the years, and she believes in the importance of reflecting on her own teaching practices to improve the quality of teaching and the experience of students' learning. She values being a good listener to her students and thinks that teachers must learn how to listen attentively to what their students have to say.

**(4.2) Achieving Trustworthiness**

Concern for trustworthiness in qualitative inquiry is a concern with credibility. Trustworthiness in this study depended on the rigour of the research process: such as careful documentation of the way the research was carried out so that the work can be open to scrutiny for reliability and validity. The principal concern of this study, as for other studies in the interpretative research paradigm, was to gain 'an understanding of the way in which the individual creates, modifies and interprets the world in which he or she finds himself or herself' (Cohen & Manion, 1994, p. 8). Qualitative data were seen as reliable for an investigation of creation and maintenance of meaning because they 'document the world from the point of view of the people studied' (Hammersley, 1992, p. 45). To deal with trustworthiness issues, the following measures have been incorporated into the research process.

**(4.2.1) Member Checks** -- Concern for trustworthiness in qualitative inquiry is a concern with credibility. According to Lincoln and Guba (1985), the essential technique for establishing credibility is through member checks (p. 314). Member checking gives the researcher one more opportunity to gather data about the integrity of the findings. In this study, the students' feedback on the validity of the findings was solicited. However, the act of member checking was viewed not only as an act of validation or refutation, but also a way of generating further data and insight. In the week after the interviews and focus group meetings, for example, interviewees were given the notes, sometimes together with the transcripts of the interviews or meetings. The researcher asked for clarification of certain points and the interviewees gave their views on the notes. The following are some examples:

Notes on interview 1 (S = student)

| |
|---|
| S: Learning is about:<br>Improvement – '… learning is a means of improving,' making things or life better<br>Advancement – a way to keep up with the rapid changes in the world<br>Independence – a means to achieve self-reliance (*Dear , can you tell me more about this point?*)<br>Confidence – learning at the university gives a student more confidence to face the outside world. |

Student reply:

| |
|---|
| Learning can give me independence so I can find a job and earn enough money for myself. Since I am knowledgeable, people will respect me as an adult and respect my thinking or my views. I am independent as an individual, not relying on anyone. I don't want to feel I have to depend on others all the time. Learning can help me get rid of this feeling. |

Through the reply, the researcher understood that learning was also about self-esteem. The researcher might not be able to arrive at a complete understanding of what the student said in the interviews and checking with students for proper comprehension was crucial.(4.2.2) Triangulation -- Data from the same source (interviews) and data from different sources (focus group meetings and journal entries) were constantly compared in order to validate interpretations made in analysis. The more informed the researcher, the more vigorous her discussion would be in dealing with inherent complexity of the phenomena under study. Multiple strategies were used to validate the data generated from interviews and students' journals. Confirmation of the transcripts or summaries of the interviews were sought from students in the study; themes and issues were examined closely against negative cases; intuitive knowledge was also used to identify and explore potential errors, inconsistent data and/or doubtful statements. Different students viewed the concept of workload, for example, differently. A student said his workload in the English programme was heavy because of the number of meetings they needed to attend, apart from dealing with the tests and assignments and projects.

Another student studying the same programme found that his workload was not too heavy, as he had no problems meeting deadlines for assignments or projects. When discussing workload, some students were interested in talking about the quantity, whereas others stressed the effort they invested in their work. Others compared the workload in the English subject (under discussion in the present study) with other subjects and talked about workload in relative terms. Therefore, the researcher in the study was very careful about eliciting responses from students about their workload, bearing in mind that the workload concept was mainly a perception -- any inconsistency in interviewees' remarks could give potentially rich ground for further exploration of students' adopted style in managing their studies. As stated by Cain and Finch (1981) and Silverman (1993), triangulation can reveal differences and multiple constructed realities apart from adding to the credibility of an account; thus, deepening understanding of different aspects of an issue.

**(4.2.3) Reflexivity** -- Reflexivity refers to the critical self-reflection of one's assumptions, biases and predispositions. The researcher always reflected on her perspectives. For example, though she believed in learner autonomy, she always tried her best to respect students' preferred learning approaches and the cultural context in which learning and teaching take place. She realised that the learning experience of some first-year university students might not be compatible with independent learning and that there is no single universally effective learning approach. She was aware that her beliefs and values, professional training and cultural background might have influenced her outlook on some of the issues in the study. The researcher reflected on the ways in which she established a social network among the students in the study, examined her personal and theoretical commitments to ascertain how they had served as resources for generating data, influencing the ways in which she interacted with the students in the research process and developing certain interpretations during analyses of the data. The researcher tried her best not to appear in the guise of a teacher when interviewing students. Thus, interviews were held outside the classroom or her office. Clear distinctions between 'emic' (the subjects') and 'etic' (the researcher's) perspectives were also made when the researcher critically examined the research process.

**(4.2.4) 'Generalisability' of findings** – The aim of this study is not to generalise its findings to a population. Rather, it intends to explore relevant concepts underpinning the study habits of a group of university freshmen. The context in which the research took place may well have an influence on the data generated. Great sensitivity was employed in dealing with the context from which data were expected to emerge. While sensitivity is an elusive abstraction in itself -- difficult to measure or evaluate, its presence is crucial to the generation of appropriate and rich data. Since data generation and analysis are both context-specific and context-bound, 'thick' descriptions about the research process were included to enable readers to establish the degree of similarity between the case studied and other cases to which findings might be justifiably transferred. It is hoped that this will enable readers to draw conclusions about the extent to which the research findings could be applied to their own contexts.

## *(5) Conclusion*

The case study in this paper has looked into how personal experience and empathic insights constitute the data in a qualitative inquiry. Various strategies were used to ensure trustworthiness of the study when dealing with interpretations of perceptions and feelings so as to explore complex subjective experiences and to give a rich and in-depth description of the phenomenon. Interpretation was the power that enabled the researcher to offer a perspective of the phenomenon, informing and directing her when she was weaving through the many subtleties in the research process; the trustworthiness of this qualitative inquiry has depended much on the meticulous care given to making interpretations in the interplay between the researcher and the data in the data gathering and analysis procedures. The research design reported in this paper demonstrates how interpretation can be enhanced by measures to ensure its legitimacy, credibility and robustness in order to increase the rigour and trustworthiness of the research process.

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## Appendix 1

**Table 1.**
***A Matrix of Notional Categories and Themes***

| Notional categories | Dimensional themes on study approaches | | |
|---|---|---|---|
| | Reactive | Adaptive | Generative |
| Views of learning context | a system | facilities in environment | professional scaffolding |
| Learning assumptions | authority-guided | context-based | achievement-driven |
| Task perception (attitudes of …) | a worker | a communicator | a planner |
| Role perception | a consumer | a client | a partner |
| Sense of responsibility | a receiver | a seeker | an explorer |
| Study management process (characterised by…) | commitment | comment, involvement | commitment, involvement, passion |