Lecture on Psychology: Discovering Student Teachers’ Conceptions of Children

Tan Ai Girl

Introduction

Most students who are successfully admitted into the National Institute of Education do not possess prior knowledge of psychology. Whether they are students of the Diploma (a two-year programme), Degree (a four-year programme), or Postgraduate Diploma (a one-year programme) programmes, majority of the students have not attended any formal session or had any training in this field. Some core subjects of educational studies can thus serve as their pioneer courses. As stated in the handbooks, educational studies focus on pupil development, school-related events, and the application of psychology in teaching and learning. Examples of modules that emphasize the practicality of psychological theories and models for the first year students are Introduction to Learning and Teaching, Foundation of Learning and Teaching, and Pupil Development and the Learning Process.

Foundation of Learning and Teaching, for example, consists of the “psychology” and the “pedagogy” components. Lecturers of the Division of Psychological Studies are responsible for the former, whereas some lecturers of the Division of Instructional Science are in charge of the latter. The “psychology” component includes areas such as learning, thinking, cognition, self-concept, self-esteem, as well as physical and moral development. The “pedagogy” component focuses on the practical aspects of teaching such as planning a lesson, presenting a lesson, and managing students’ behaviours. Student teachers are reminded that most existing theories are products of other cultural settings. Whether they are contemporary or classical, suitability of these theories for the Singapore context should be examined. Often, lecturers attempt to relate theories to the contemporary real-life situation, and current social and psychological problems. Student teachers are thus made aware that they should tailor the theories according to the needs of the Singapore society.

How should psychological theories and models be introduced to student teachers? What kinds of assumptions should lecturers uphold?
Before introducing a new content, lecturers should find out the level of understanding and prior knowledge of their students. Prior knowledge of students can be useful, especially when it is related to the new content. It is also essential to discover students’ level of understanding, and to predict difficulties they might encounter in understanding a new concept. Accordingly, lecturers can outline appropriate content, and employ suitable pedagogical strategies. Asking questions orally or in written form can help discover students’ prior knowledge and experiences. This paper reports on the first year student teachers’ conceptions of children. Results of the survey are discussed and suggestions on effective lectures are proposed.

**STUDENT TEACHERS’ CONCEPTIONS OF CHILDREN**

97 first-year student teachers of the Bachelor of Arts and Bachelor of Science programmes attended the first lecture on child psychology on 16 September 1995 (9.00 a.m. to 10.50 a.m.). They were 59 female students with an average age of 19.5 years, and 38 male students with an average age of 21.3 years. A week before the survey, they were exposed to the history of the Singapore education system. After a 15-minute introductory session on modern psychology, these student teachers were invited to participate in a paper-and-pencil survey. The aim of this survey was to elicit their conceptions of children. The survey lasted about 15 minutes, and then the formal lecture on child psychology began.

The instrument consisted of four pages. The first page described the purpose of the survey. The second and third pages comprised 44 statements concerning general themes of child psychology. Children’s innate nature and developmental processes were the main focus. The last page was the answer sheet. Three senior lecturers who attended the lecture assisted in the administration of the survey. Student teachers were requested to judge the statements according to their common sense and experience. A 7-Likert scale was employed. "1" indicated that the subject disagreed totally with the statement, whereas "7" referred to total agreement.

**RESULTS**

There was no significant gender difference in the first year students’ conception of children. The majority of them believed that children are born with a good nature and disagreed that children are innately bad
They did not have a distinctive position on Locke's environmentalist argument about the mind of the newborn being like a piece of white paper — *tabula rasa*. They also did not demonstrate a strong affinity with Rousseau's nativist perception: *children are born with innate knowledge and ideas that unfold naturally with age* (see Figure 2). The vertical axis (Figure 1 and Figure 2) displays the percentages of student teachers' responses, whereas the horizontal axis represents the 7-Likert scale.

Figure 3 exhibits a two-dimensional representation of student teachers' conceptions of children from the multi-dimensional scaling method. Four clusters were formed. They were interpreted as continuous development versus discontinuous development, and the nature approach versus the nurturing approach. Continuous development regarded development as a life-long process, from the moment of conception until the last moment of life. In contrast, discontinuous development believed that development ceases after a person attains adulthood.

Table 1 displays sample items of each cluster. Items of each cluster were summed, and their percentages were computed. 93 per cent of them agreed with the nurturing approach, and were convinced that development is a continuous process. In contrast, 7 per cent of them agreed with the nature approach and the discontinuous development.

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**Figure 1:** Children's Good versus Bad Nature

[Bar chart showing good nature and bad nature across 7 levels]

**Figure 2:** Student Teachers' Perceptions of Environmentalist versus Nativist Viewpoints

[Bar chart showing Tabula Rasa and Innate Knowledge across 7 levels]
**Figure 3:** Two Dimensional Representation of Student Teachers' Conceptions of Children

**Table 1: Sample Items of Various Clusters**

<table>
<thead>
<tr>
<th>Continuous Development</th>
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<tbody>
<tr>
<td>Learning continues until the last day of life.</td>
</tr>
<tr>
<td>Learning is equally important during all periods of development.</td>
</tr>
<tr>
<td>Development begins at the day of conception and ends on the last moment of life.</td>
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<tr>
<th>Discontinuous Development</th>
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<tbody>
<tr>
<td>Development ceases after a person attains adulthood.</td>
</tr>
<tr>
<td>Learning attains its full potential before one reaches adulthood.</td>
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<table>
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<tr>
<th>Nurture</th>
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<tbody>
<tr>
<td>In learning, environment is more important than heredity.</td>
</tr>
<tr>
<td>Children's abilities are shaped by adults (specially parents).</td>
</tr>
<tr>
<td>Knowledge comes to children only through experience and learning.</td>
</tr>
<tr>
<td>Children are the products of their environment and upbringing.</td>
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<table>
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<tr>
<th>Nature</th>
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<tbody>
<tr>
<td>Development proceeds through a predictable series of stages that are guided by an inborn</td>
</tr>
<tr>
<td>timetable.</td>
</tr>
<tr>
<td>Children are born with a set of linguistic structures.</td>
</tr>
<tr>
<td>Children inherited parents' abilities.</td>
</tr>
<tr>
<td>Children enter the world with brains that are highly structured.</td>
</tr>
<tr>
<td>Children inherited parents' behaviours.</td>
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INTERPRETATION

Student teachers' conceptions of children can be employed as a reference for designing effective lectures. Firstly, the lecturer can share results of the survey with student teachers. While the lecturer presents findings of the survey, new terms such as the nurturing approach versus the nature approach can be presented together with various perspectives of child development (e.g. behavioural, cognitive, ecological). Then, the lecturer can introduce fundamental works of a few prominent developmental psychologists: John Locke (1632-1704), the environmentalist; Jean Jacques Rousseau (1712-1778), the nativist; Jean Piaget (1896-1980), the cognitive psychologist; and B.F. Skinner (1905-1990), the behaviourist; L.S. Vygotsky (1896-1934) and Noam Chomsky's (1928-) theories of linguistic development. Student teachers at this stage may be confused with various models. It is thus indispensable to emphasize fundamental ideas rather than details of each approach.

Student teachers approved continuous development. The meaning of continuous development from the psychological perspective can be elaborated by referring to the concept of life-long learning versus early childhood learning. Bilingual education is an indispensable component of the Singapore education. Student teachers are exposed to Tsunoda's (1993) research on the brain's functions and language acquisition. According to his proposition, cognitive structures of children are bilingual if they could learn two languages at the early age (before 9 years of age) and live in a conducive home and social environment.

THE FIRST LESSONS

Often, student teachers question the practicality of psychological models. There are a few reasons that cause their doubts and discomfort. Firstly, psychology is a new subject for many of them. Almost none of them has been exposed to psychological models and theories in schools. Lack of prior knowledge may be one of the causes of their discomfort. Secondly, most psychological theories and models are products of other cultural settings. Furthermore, very few psychological theories and models are translated for the classroom settings. Rarely, there are classroom-based findings with local examples. Consequently, lecturers should introduce the models and theories systematically, and attempt to relate them to the local situation. In addition, they should implant open attitudes into the students in
understanding and accepting existing psychological theories and models.

A few guidelines are proposed for the first few lectures. Firstly, a **global overview should be presented before elaborating specific theories.** Considering the fact that most first year students do not possess background knowledge of psychology, it is essential to present them with an overview of what constitutes psychology, and how psychology has evolved. There are three main features of psychology. Firstly, modern psychology is an independent field from philosophy. 1879 marks the begin of modern psychology when Wilhelm Wundt founded the first laboratory of psychology in Leipzig, Germany (see Koch & Leary 1985). Secondly, psychology is a multi-disciplinary field. It can be treated as a science, and as a social study (see Boneau 1992; Altman 1987; Koch 1993; Spence 1987; Matarazzo 1987; Fowler 1990). Thirdly, psychology is multi-cultural. After 1950s, most theories, tests, and models have been examined across cultures. Two significant developments are the establishment of cross-cultural psychology (1960s) and the emergence of indigenous psychologies as subsets of cross-cultural psychology (1980s) (see Kim & Berry 1993; Moghaddam 1987). The ultimate goal of these psychologies is to establish a nearly universal psychology (Berry et al. eds. 1992).

If the first lesson concerns early childhood, it is necessary to present a brief introduction of developmental psychology. This includes fundamental themes of development such as nurture versus nature and various perspectives of development (e.g. behavioural, cognitive, ecological). Strengths and weaknesses of each model as well as their inter-relations are discussed in the second lecture. For the past few decades, developmental psychology has been one of the essential areas of research for cross-cultural psychologists (see Triandis & Heron 1981; Best & Ruther 1994). Cross-cultural studies on various models of human development are also consulted.

Secondly, **there should be a balance between theory and application.** The application of psychological theories and models for educational purposes is the main concern of educational psychologists. Some textbooks of educational psychology of the 1990s editions adopted this standpoint. Anita Woolfolk’s (1995) “Educational Psychology” (6th edition), for instance, compared to that of the earlier editions is a new version by itself. It encompasses not only existing psychological theories, but also current social and educational problems, cross-cultural results, multi-cultural education, and
educational trends in the next centuries. In the first meeting of *Foundation of Learning and Teaching*, the first year Bachelor degree students are exposed to the history of education in Singapore. The contents are integrated into the first lesson of psychology (practically the second meeting). Singapore educational policies are referred, for example, bilingual teaching and learning, independent and cooperative learning, as well as promoting higher order thinking skills. When is the most appropriate period for a child to learn a second language, and why their talents should be recognised at the early age are discussed in reference to some models proposed by developmental psychologists.

Thirdly, there should be a “bridge of communication” between experts and novices. It is believed that every person possesses his conceptions of the existing phenomena. These conceptions are organised information shaped by one’s experiences and influenced by social and cultural factors. Such conceptions are termed implicit theories by Robert J. Sternberg (1985). According to him, if implicit theories are studied systematically, they can be developed into scientific theories. Common sense is acknowledged by some psychologists as an essential source of information for understanding and predicting human behaviours. How do we discover students’ conceptions of children in the first lesson? An informal conversation may serve this purpose. Another alternative is to employ a questionnaire. The lecturer may, at the end of the survey, analyse the data and discuss the results in the next lecture. One of the advantages of conducting a survey over the informal spoken communication is that the former involves all students but the latter caters to the needs of a few of them. The lecturer can incorporate students’ responses into the next lecture, and use them as a reference to improve his lecture. The survey may also increase students’ interests in learning because the set of data is the product of their thinking processes.

**SUMMARY**

Figure 4 depicts a balance mechanism of the three principles. Questions proposed for the global overview (the horizontal axis) are as follows:

*In which cultural settings are the theories developed?*

*Why do we need to comprehend various models?*

*What are strengths and weaknesses of each model?*

*Can the models explain psychological characteristics of the Singaporeans?*

*How do these models relate to each other?*
The specific viewpoint explicates the detailed information of a model. For the theory versus application axis, the main concern is to relate theories to activities happening in the contemporary society. The expert versus novice axis emphasizes the compatibility of the lecturer's professional knowledge and the student's understanding. It is vital to encode professional knowledge into the language of communication that can be conceived by the student.

![Figure 4: A Balance of the Principles](image)

**Summary**

It is a challenging task to decide what to share with, and how to motivate students in the first lecture. To design an effective and useful lesson, one should be aware of the students' intellectual background, and should possess ample information about their needs. This article highlights three principles: **presenting an overview before delivering specific theories**, **exerting a balance between theory and practicality**, and **establishing a basis for common communication between experts and novices**. Before the formal lessons on child psychology, the first year student teachers of the Bachelor degree programme participated in a paper-and-pencil survey concerning their conceptions of children. Student teachers perceived human development as a continuous and nurturing process. They believed that children's nature is good. It is convinced that students' conceptions can up-grade the effectiveness of teaching, and can be referred in developing indigenous models.

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**ENDNOTE**

Please refer to Handbooks published by National Institute of Education, Nanyang Technological University (1996), Diploma in Education/Diploma in Physical Education, p 55; Bachelor of Arts/Science with Diploma in Education/Bachelor of Arts/Science with Diploma in Education (Physical Education), p 78; Postgraduate Diploma in Education, p 46.

**REFERENCES**


**ACKNOWLEDGEMENTS**

I would like to dedicate this paper to my beloved sensei, Prof. Takanori Akiyama, an honorary professor at the Tokyo Institute of Technology, in conjunction with his 68th birthday on the 1st of August 1997. My special gratitude to his patience and dedication in supervising me (1987-1991).