CONTENTS

OVERVIEW

by Ho Wah Kam

This issue of REACT carries another 14 abstracts of research articles and reports on a variety of topics. Each abstract attempts to selectively summarize and highlight those aspects of the study that will be most relevant and interesting to the busy classroom teacher. Implications of the research findings for the teacher constitute a special feature of each abstract. The language used is non-technical.

Except for Lily Wong's "Reaction to Research Findings", which provides an interesting comment on how people instinctively react to research findings (after they have known the results), the contents of the other 13 abstracts can be broadly classified (for convenience here) under three rubrics, namely, (I) Society-home-school *nexus,* (2) Children's learning characteristics, and (3) *School/classroom processes.*

Society-Home-School *Nexus*

Four abstracts exemplify the kind of research that addresses the issues pertinent to understanding the linkage between society, school and home. To begin with, the abstract "Getting Parents Involved" draws attention to a survey carried out in the UK to identify, describe and classify the range of activities undertaken to promote contact between home and school The findings should be of great interest to Singapore schools. The effects of different aspects of the environment on school learning have always attracted the attention of educational researchers. For example, would time spent outside school, as described in "Out-of-School Activities and Reading", be a significant factor contributing to school achievement, e g. reading proficiency? The answer appears to be clearly Yes in that particular study. Or in the case of "Bilingual Education and Social Class", external factors such as intergroup relationship and the socio-economic background of the learners were studied for their relationship to the extent that a second language (such as English) is successfully learnt in a bilingual setting like Hong Kong's. Closer home, the abstract "English in Singapore. Attitudes To Its Use" serves as a good example of a local study which examines, from a sociological point of view, the attitudes teachers have towards what is described as Singapore English, given the fact that Standard British English remains the preferred variety of English for instructional purposes.

Children's Learning *Characteristics*

Four other abstracts focus on children's learning characteristics. For instance, how well do primary school children understand the concepts and measurement of area? The same question, phrased differently, may be asked of learners of history at school. The answer in the case of mathematics is given in "Understanding of Area" based on Tan Chu Sing's study, while that for history is discussed in "Effects of Children's Understanding of Time Concepts On Historical Understanding", which examines the question of concept-understanding from different psychological perspectives. With regard to music education, the abstract "Are Reflective Children More Musically Creative?" provides some research data on the relationship between children's musical creativity and their personality. For the less academically inclined children, consistent failure at school may result in a psychological condition known as "learned helplessness", a problem studied by Tey-Phoon Sau Hing in "Learned Helplessness and School Performance".

School/Classroom Processes

The remaining five abstracts direct attention to the process factors (such as what teachers do in classrooms) and their effects on children's attainment, attitude and behaviour. In her study (abstracted in "Science Process Skills in Primary Schools"), Jane Singham wanted to know whether science process skills as outlined in the primary science syllabus had been correctly interpreted and effectively implemented. "Praising Pupils Effectively" is an abstract of a review of research on how pupils perceived praise and how praise promoted learning. Since the role of humour in a learning situation, while important, is not often studied, the next abstract "Humour and Creativity", which examines the relationship between humour (i.e. being exposed to humorous stimuli) and creativity, would be of special interest to teachers. It is common knowledge that the management of disruptive behaviour in the classroom presents special problems of its own, but the abstract "Changing Teaching Practices to Improve the Behaviour of Low Achievers" goes a little further to tell us how the disruptive behaviour of low achievers can be improved by changing certain classroom management strategies. Finally, as a preparation for the world of work, career guidance for pupils is now seen as part of the pastoral care programme in Singapore schools. So, for purposes of comparison, how well local schools guided pupils in the past in the choice of a career was one of several questions asked by Esther Tan in "Career Development of Secondary School Pupils".

Endnote

In this issue we again include in a colourful broadsheet some key findings in *snippet* form from research studies not abstracted here. They range over a number of subject areas. We hope you will find them interesting and thought-provoking, but there is a *cautionary note* - the findings as given in these snippets should not be over-generalised.

Finally, we hope you will enjoy reading the abstracts and snippets in this collection. After you have read them, consider these questions: Are the findings in each case obvious and predictable? What part does hindsight play in your reactions? If you go back to the abstract "Reaction to Research Findings", you will find some interesting answers to the same questions posed in that particular study.

CHANGING TEACHING PRACTIC
TO IMPROVE BEHAVIOUR OF
LOW ACHIEVERS

by J. David Hawkins and Others

Abstract by Chuah Toh Chai

WHAT WAS THE RESEARCH ABOUT?

Research has found that disruptive behaviour in school is closely related to low academic achievement. Conventionally, the management strategy of 'divide and control' by means of segregating the disruptive students from the main classroom activities is used to tackle the problem. This method has been found to cause more harm in the long run as the behaviour of such students gains greater peer support in a highly visible 'fraternity' under tne grouping system.

WHAT WAS THE PURPOSE OF THE STUDY?

The research set out to test the feasibility of instructional methods aimed at creating greater opportunities for low achievers to participate successfully in the learning activities in the classroom. It was believed that greater involvement with positive rewards would help to minimize disruptive behaviour in low achievers.

HOW WAS THE RESEARCH DONE?

A package of instructional methods consisting of preventive approach to classroom management, interactive and co-operative learning was tested out in five middle schools in Seattle. In three of these schools, classes of the seventh grade were randomly assigned as experimental and control groups. The remaining two schools were either a full experimental or a full control scnool. Teachers in the experimental classes were qiven special in-service training to familiarize themselves with the use of the package. Clinical observations were carried out in experimental classes. The control group was left to carry on as usual.

The research instruments consisted of a pre/post survey questionnaire administered to all participating students, measuring their perception of opportunities, skills and rewards experienced in the classroom using the package. Scores from standardised tests on math, Language and reading were used as the measures of academic achievement. The sense of belonging to school and to individual classes was measured by eight items in the survey.

AT WERE SOME OF THE FINDINGS?

At the end of the first year of the experiment, there was no siginificant improvement in the academic performance and serious misbehaviour among the experimental group as compared to the control group. However, the low achievers in the experimental group were found to have a greater sense of belonging to their classes than before; their attitude towards mathematics was more positive and they had a higher expectation with regard to future education.

WHAT ARE THE IMPLICATIONS FOR TEACHERS?

1. Instructional methods that take into consideration the need of low achievers to experience success in learning activities must provide sufficient opportunities and the necessary skills for these students to participate actively in the class.

2. Interactive instruction and positive management strategies should bring about a more canducive learning climate and ensure greater **participation** of all students, thus minimizing serious disruptive behaviour from the low achieving students.
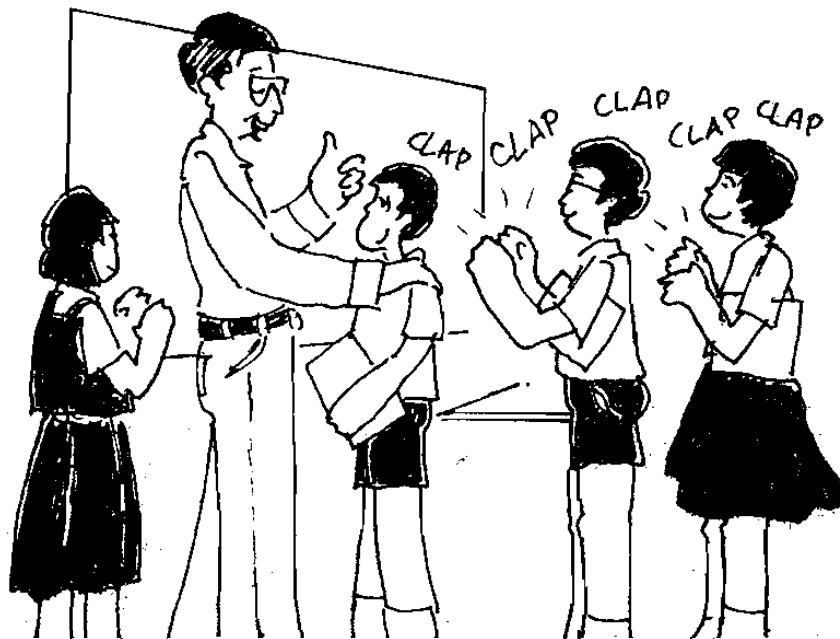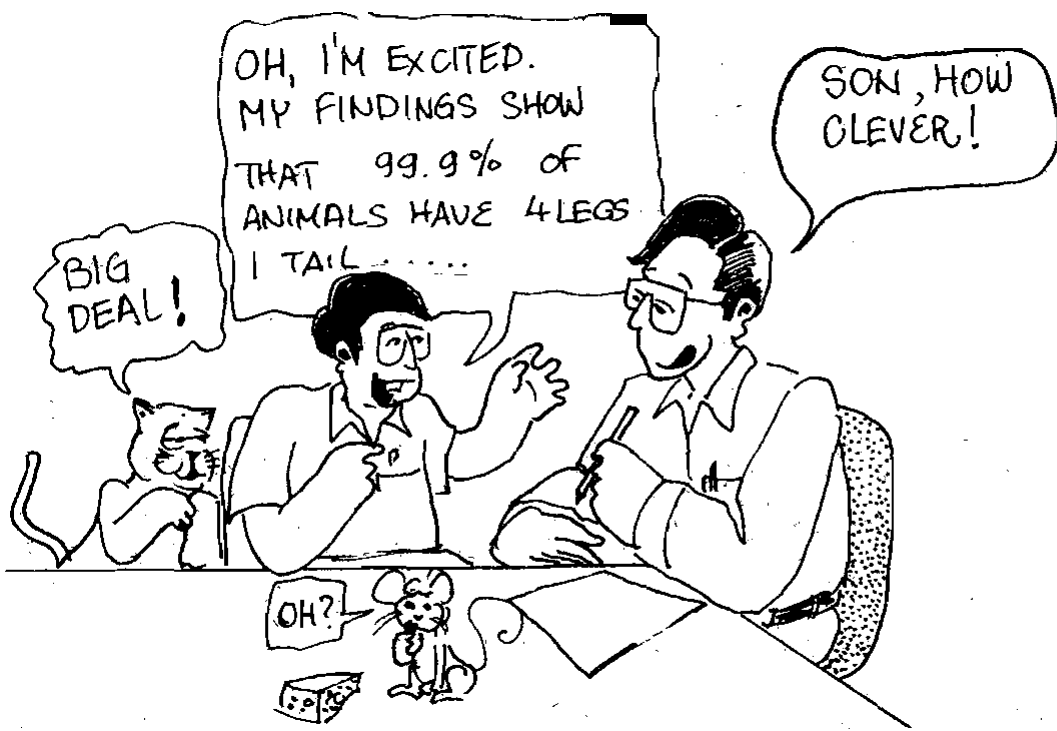

This is an abstract **of** the article "Changing Practice in Mainstream Classroom to Improve Bonding and Behaviour of Low **Achievers**" by J. David **Hawkins**, Howard J. Doueck and **Denis** M. Lishner, American Educational Research Journal, 1988, **25(1):** 31-50.
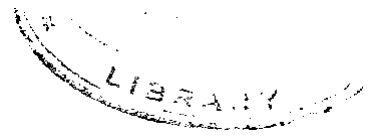
REACTION TO RESEARCH FINDINGS

by LILY Y.S. WONG

Abstract by Lily Y.S. Wong

WHY WAS THE STUDY DONE?

People tend to judge an event as obvious and predictable after they have learnt of the outcome. This study investigated how a sample of people reacted to research findings. The aim was to determine if people could really predict what was a true finding from what was not.

HOW WAS THE STUDY DONE?

Data were collected by means of five questionnaires representing three experimental conditions. In each questionnaire there were 12 items culled from research findings on teaching, e.g., Item 3: Third graders learn more in reading groups when teachers call a student's name first and then ask a question, and Item 4: Reading achievement is higher when third-grade teachers use more paper-and-pencil activities and less manipulatives, such as toys and games.

Each of the 1215 subjects, comprising teachers, teacher-trainees, undergraduates in psychology and undergraduates in engineering in Singapore and in the San Francisco Bay Area, was randomly given one questionnaire. This method was used to assign each of the subjects to one experimental condition. Subjects in condition (a) had to select the actual finding from two possible outcomes, subjects in condition (b) were given an outcome which was either actual, or directly opposite to the actual finding, and subjects in condition (c) were given outcomes as in condition (b) but accompanied with explanations. Under all conditions, subjects had to rate the obviousness of the outcome.

WHAT WERE THE FINDINGS?

* Subjects could not predict true findings from their opposites.

    a) they chose opposite findings as often as they chose actual findings.

    b) they rated opposite findings as obvious as they rated actual findings.

* Findings with explanations were rated more obvious than findings without explanations.

* When making judgements, people were generally influenced by the knowledge of an outcome.

WHAT ARE THE IMPLICATIONS?

* Findings from research on teaching are far from obvious.

* The feeling of obviousness when reacting to research findings, is an effect of knowledge of the outcome.

* People, be they Singaporeans or Americans, teachers or non-teachers, male or female, do succumb to hindsight effect.

GETTING PARENTS INVOLVED

by S. Jowett and M. Baginsky

Abstract by Jay Yap

THE STUDY

This study is a survey of the nature of parental involvement in schools in the local education authorities (LEAs) of England and Wales. The main aims of the research were to identify, describe and classify the range of work being undertaken to promote contact between home and school, and to examine a number of initiatives in detail.

The study was conducted in two phases. The first phase involved a questionnaire-survey of all local education authorities in England and Wales to elicit information on work with parents. The second phase (still in progress) involves case studies of a number of home-school programmes in certain LEAs.

THE MAIN FINDINGS

Responses to the questionnaires sent out to all the LEAs showed a complex and diverse range of activities subsumed under the heading 'parental involvement'. Included in this huge range of activities were those involving parents directly in the home-study programmes Of their children (e.g. Maths improvement home-study programmes), induction programmes for parents of first year pupils, the use of parents in consultative roles on school issues and in actual decision-making, as well as courses to help parents in their parenting role. Through the great wealth of information obtained from the survey, the study came up with three broad reasons for the maintenance of effective home-school liaison:

- to enhance parents' ability to help their own children

- to keep channels of communication open between the home and school for reasons of facilitating feedback, etc.

- to help meet the needs and rights of parents as consumers.

IMPLICATIONS FOR SCHOOLS IN SINGAPORE

This study has particular relevance to the Singapore context where parental involvement in schools thus far has been confined largely to the work of Parent-Teacher Associations, and parents' attendance at such school functions as National Day Celebrations, Orientation Day for primary one classes, Speech Day and end-of²year school concerts.

In highlighting the broad range of potential benefits of involving parents in schools, this study offers a challenge to Singapore schools to:

- examine, initially, their attitude to involving parents in schools, and the possible obstacles to such involvement,

- explore ways and means of using parents more directly as ''complementary educators' in monitoring the school progress of their children (such as through parent-child home-reading programmes),

- consider the possibility of tapping the professional expertise of parents and using their contributions to enrich the existing school curricula, and

- devise ways of **maintaining** an effective home-school liaison **to** facilitate feedback and **communication** between parents and teachers.
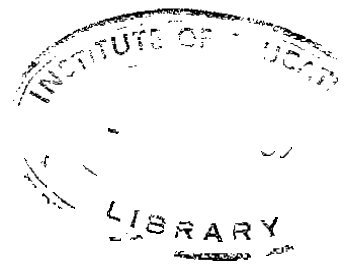
OUT-OF-SCHOOL
ACTIVITIES AND READING

by R. C. Anderson, and Others

Abstract by Maureen Khoo

PURPOSE OF THE STUDY

Studies in the 1970s established the link between children's time spent in school and their achievement in reading. Little is known, however, of how children's time spent out of school affects reading achievement. There have been only two major studies focussing on out-of-school independent reading. Anderson, Wilson and Fielding's study is the most intensive and stringent on the subject to date.

HOW THE STUDY WAS DONE

The study used 155 fifth grade students from two schools in Illinois. The 85 boys and 70 girls in the study were all above the national average in reading achievement.

The children had to complete a daily record of out-of-school activities. The activities were listed in clearly defined categories with certain categories demanding more specific information than others.

Examples: I spent _____ minutes listening to music.
          I spent _____ minutes playing a sport called _____.

Meticulous training and guidance was given to children in filling out the forms, and an incentive system was used to motivate compliance.

THE FINDINGS

1. Of the 14 out-of-school activities entered by the children, reading books was the activity that proved to have the strongest association with reading proficiency.

2. The amount of time a child spent on reading books during his 2nd to 5th year of school was the most reliable indicator of how much that child would grow as a reader in those years. Children who were good readers in the second grade did more reading in the fifth grade.

3. Out-of school reading time could have as much bearing on reading achievement as did in-school reading time.

4.   There were astounding differences between children in the amount of out-of school reading they did, varying between 4.1 and 16.5 minutes a day.

5.   Girls read more than boys.

6.   classes that did the most reading read *3.6* times as much on the average as the class that did the least reading.   This suggests the importance of teacher influence on reading.

7.   Watching television was the activity shown to have a nearly negative relationship with book reading.   But eating dinner, doing chores, doing homework and reading comic books had positive relationships with the number of books read.

8.   Reading books is a cause not just a reflection of reading proficiency.

IMPLICATIONS FOR TEACHERS

Time spent on certain out-of-school activities can have a strong bearing on school achievement, particularly reading proficiency.

Teachers play a very important part in motivating children to give time to reading.

Motivating children to do independent reading out of school merits as much attention in teacher planning as providing a good reading programme in the classroom.

The reading habit and interest in reading has to be instilled early, preferably in the first two years of school.

Greater effort is needed to motivate boys to read.

BILINGUAL EDUCATION
AND SOCIAL CLASS IN HONG KONG

by Yau Man Siu

Abstract by Chuah Toh Chai

WHAT WAS THE STUDY ABOUT?

This study examined two sets of interrelated external factors which were considered critical to the success of the bilingual education programme in Hong Kong. These factors were: intergroup relationship and perceived usefulness of English; competence in Chinese and the socio-economic background of the learner.

HOW WAS THE STUDY DONE?

It was believed that students from the lower socio-economic background lagged behind those from higher social positions in mastering English under the bilingual education programme in Hong Kong. Acording to the author, the social background of the learners was the overriding factor affecting their potential to benefit from the bilingual education.

To prove his point, the author made a correlational analysis of the enrslment at the two universities in Hong Kong with the social backgrounds of the students.

WHAT WERE SOME OF THE FINDINGS?

According to the author, mastery of English language was found to be important in gaining access to greater social status and benefits by the Chinese elites in Hong Kong, the learning of English was given active support. In contrast, the majority of the Chinese speaking population found little use for English language in their daily activities. Their interest in learning English was marginal.

This lack of interest in learning English among children from lower social backgrounds was aggravated by the absence of English language at home, while Chinese language was adequate for communication purposes in life. There was no obvious reason for these children to want to master a foreign language.

The problem of learning a second language, English, was found to be as much a linguistic as a sociological problem among the children from the lower social backgrounds in Hong Kong.

The analysis of the enrolment patterns at the tertiary education levels bore out the disparity of interest in learning English between different social strata. A greater proportion of students at the University of Hong Kong came from higher social

backgrounds with better track records in English language.

WHAT ARE THE IMPLICATIONS FOR TEACHERS?

1. When the learner is aware of the usefulness of learning
    a language, he can become a motivated learner. The teacher
    can help students in this respect by stressing the practical
    values of learning the language.

2. The general language conditions at home should be taken into
    consideration by teachers in planning language activities
    for their students.

ENGLISH IN SINGAPORE: ATTITUDES TO ITS USE

by Catherine Lim

Abstract by Catherine Lim

PURPOSE OF THE STUDY

Do Singaporean speakers of English suffer from a tendency to denigrate their own speech, especially in relation to Standard British English (the variety used in BBC and in the traditional grammar textbooks)? Does Singapore English have any status whatsoever; does it serve a useful purpose, such as creating a feeling of belonging or "solidarity" among Singaporeans, thus giving them a sense of identity? These are questions the study attempts to answer.

HOW THE STUDY WAS DONE

A survey was carried out among 85 teachers of English in junior colleges and secondary and primary schools in Singapore. (The choice of teachers as the subjects of the study was based on the fact that their attitudes, more than those of other groups of Singaporeans, would have far-reaching consequences since these attitudes would translate into actual classroom practices affecting scores of school children.)

The survey made use of

- a questionnaire comprising a number of statements about Singapore English and Standard British English, against which the subjects indicated their preferences, and

- six audiotaped samples of the speech of a wide range of Singaporean speakers which the subjects listened to and evaluated.

THE FINDINGS

It was found that a significant number of subjects believed and felt that Singapore English was undesirable for **formal** situations. They expressed their alarm that this undesirable variety had become widespread (75 per cent of the subjects said they were "appalled by the speech of even highly educated Singaporeans".)

A significant finding was the insistence of the subjects on the need to continue to depend on the Cambridge Examinations Syndicate, and also on the recruitment of expatriate native speaker teachers and teacher-trainers, in order to maintain standards of English in Singapore schools.   The subjects were equally insistent that grammar teaching should be preserved at all costs (84 per cent said that the first concern of English language teachers was to teach grammatically correct English).

IMPLICATIONS FOR THE CLASSROOM TEACHER

It can be seen that the question of standards is uppermost in the minds of teachers of English, and that the matter of grammatical correctness is of paramount importance in the classrcom.   This means that in responding to new methods of teaching English, no matter how revolutionary, teachers are likely to continue to adhere to a traditional core of teaching principles and practices.   For instance, in the current appeal of the communicative method with its emphasis on fluency and "naturalness" in speaking and writing, the emphasis on correctness in the classroom has by no means been discarded.   This is not reprehensible since the teacher has to teach forms of English that are considered desirable in certain social contexts.   A teacher should always maintain a balance between new methodology and those aspects of traditicnal teaching that are worth preserving.   The needs of her pupils should serve to guide her teaching.

In relation to Singapore English and Standard English, each has its place in the socio-psychological needs of the pupil.   Singapore English is the English for informal interaction and the expression of a sense of belonging to a particular social group, whiie Standard English is the English for formal situations and for written communication.   While Singapore English has developed spontaneonsly and ought to be seen as the natural language of interpersonal interaction (and hence, not 'inferior' to Standard English or any other variety of English), Standard English obviously nas to be taught in the classroom, to ensure that the pupil has a range of varieties of English to serve his range of language needs.
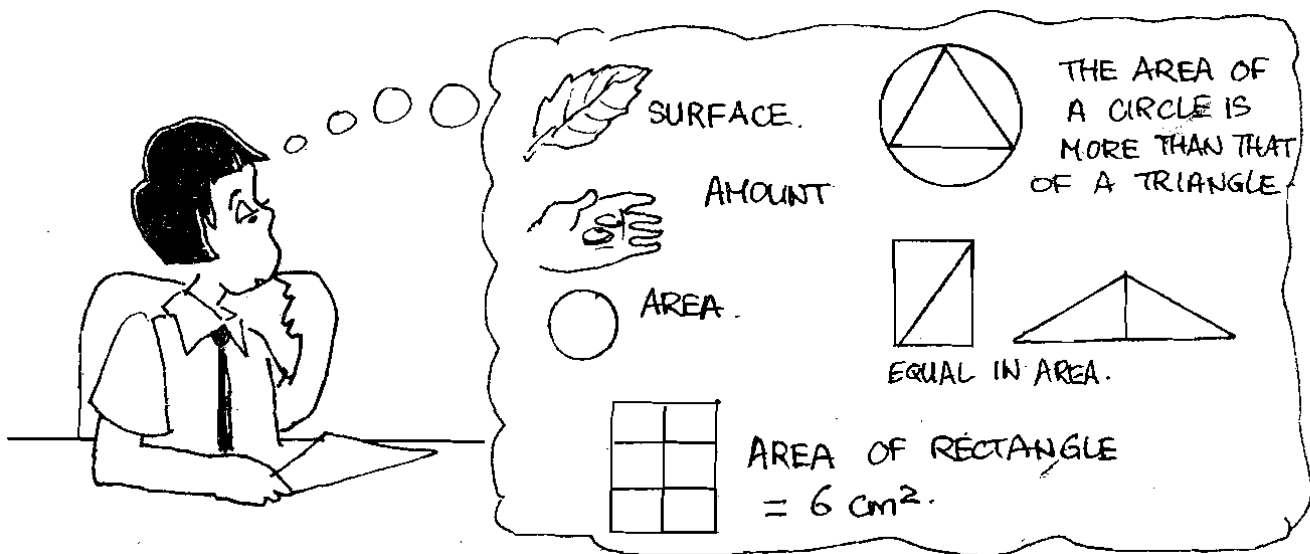

This is an abstract of Dr Catherine Lim's Ph.D thesis (National University of Singapore) which is entitled English In Singapore: A Study Of Its Status And Solidarity And The Attitudes To Its Use (1986).

UNDERSTANDING OF AREA

by Tan Chu Sing

Abstract by Chai Chee Meng

This study is concerned with Primary School pupils' understanding of area and its measurement. The subjects of the study were pupils who had been taught the formula for finding the area of a rectangle and the method used to investigate the extent of their understanding of the concepts and measurement of area was the administration of a paper and pencil test together with interviews of selected .subjects.

HOW WAS THE STUDY DONE?

The teskinstrument was validated by means of two pilot studies. In the main study, a total of 282 pupils from Primary 5N and Primary 6E were given the **validated** test. The items in the test **were** designed to **permit** a description of four levels of development which pupils seem to attain as they **develop** .a full understanding of the concepts of area and its measurement.

- Understanding of the vocabulary of area.
- Sorting and matching.
- Conservation of area.
- **Measurement of area.**

Based on their test scores, the pupils were divided into three different ability groups of high, average and low. A clinical interview of 16 pupils, selected from the three ability groups, was conducted to check for evidence of the four levels of development.


WHAT WERE THE FINDINGS?

The evidence from the interviews when compared with the scores in the written test suggests that the low ability group of pupils lack competence and understanding from level II (Sorting and Matching) to level IV (Measurement of Area). The average ability group of pupils are competent up to level III (Conservation of Area). They are less competent in computing the areas of composite figures. The high ability group of pupils are conservant and competent in all the four levels.

WHAT ARE THE IMPLICATIONS FOR TEACHERS?

The findings suggest that pupils' understanding of area and its measurement develop sequentially. Pupils who cannot compare the relative sizes of areas by sorting, cutting and matching will have difficulty with the concept of conservation and the measurement of area. Teachers need to provide pupils with the experiences of matching, cutting, ordering shapes and the use of different measurement units (non-standard and standard) before introducing the use of formulas.
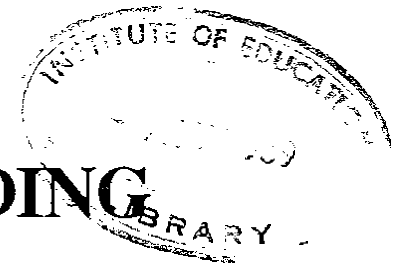
EFFECTS OF CHILDREN'S UNDERSTANDING OF TIME CONCEPTS ON HISTORICAL UNDERSTANDING

by S. J. Thorton and
R. Vukelich

Abstract by Goh Chor Boon

WHAT IS THE STUDY ABOUT?

The study reviews some of the major research efforts on the development of time and historical understanding in children, and what these findings imply about instruction in history. The findings are grouped into three main categories, with each category representing a point of view. An alternative view of how time and historical understanding affect the teaching of history is also proposed.

WHAT WERE THE MAIN FINDINGS?

(A) Children's understanding of time.
     Research shows that children's understanding of time is developmental. Each age group has distinctive characteristics in terms of what children can normally understand about time. Between the ages of four and seven, children's understanding of time is largely specific to themselves, and to persons and events in the immediate surroundings. Time terms like before, after, **now** and **then** are acquired. Children are also able to describe their daily events, starting with getting up in the morning and ending with going to bed at night, that is, in an orderly chronology of behaviours. By ages 6 and 7, rudimentary clock-time and calendar-time skills begin to appear.

     Children's time understanding develops greatly between the ages of 8 and 11. They are now able to estimate how long ago events took place, to place events in sequence, and to associate dates with particular people and events. Finally, from 12 to 16, the young adolescent's time understanding begins to resemble adult understanding. Clock and calendar time skills have been mastered. Historical dates can be matched to persons and events with consistency and time labels or periods are recognised accurately.

(B) Relationship between understanding time and **learning** history.
     There are three main views on how children's understanding of time concepts affect their understanding of history:

     View 1: The **Developmental** Cognitive View
     Based closely on the work of Piaget, this view suggests that the growth of time and historical understanding depends on overall cognitive development. Young children, prior to arriving at the stage of formal operations, are only capable of judging past events from the standpoint of the present day..

View 2: The Psychosocial/Developmental View

This view argues that the most basic element in an individual's understanding of history is his understanding of time. It is only during adolescence that a person places his or her life in context with the community. The adolescent can question the past and recognise that past events do affect the present and, eventually, will shape the future.

View 3: The Organic Curriculum View

This is a practical view and is concerned with how time concepts can be best taught. It argues that tine is mastered in the context of social problems that have meaning and purpose for children. Thus, a problem-centred approach in teaching is adopted to provide time and history learning opportunities, even at the lower primary grades.

(C) An Alternative View: The Developmental-Historical Time View

This view, as proposed by the authors, is based on the hypothesis that the understanding of time and history are interdependent. In understanding time and history, the developmental historical view assumes that some concepts are mastered, others are added and old concepts may generate new meaning later in life. In summary, the view suggests that since learning time is closely linked to the learner's current cognitive development, certain historical time and history concepts should be taught in as early as the first year of primary education. Instruction should be systematically and sequentially carried out as one would teach concepts in maths, reading, or science. Time understanding should also be a major consideration in how historical topics are introduced. Time language used properly may simplify or bring persons and events of the past into historical focus. It is recommended, for example, that historical personalities and events should be introduced without dates prior to age nine.

SOME IMPLICATIONS FOR TEACHERS

The studies cited suggest that the understanding of historical time is a major consideration in the teaching and learning of history. This is because time appears to be an integral component of historical reasoning.

Historical time language should be introduced and discussed in social studies during the primary years. Teachers should be aware that children in the lower primary are able to place family members in correct age sequence, use dates but cannot accurately match year to person or event and correctly arrange given dates in chronological order. Children at the upper primary levels are able to use a specific number of years as a time referent, match significant people with events and label periods of time.

ARE REFLECTIVE CHILDREN MORE MUSICALLY CREATIVE?

by Charles P. Schmidt and Jean Sinor

Abstract by Ho Hwee Long

Music teachers have been developing children's performance skills and knowledge more than encouraging their creativity. It seems that young children's musical creativity may be related to their personality such as being reflective and impulsive.

Some children are more reflective in that they take more time and greater care to decide on solutions when problems are posed to them. In contrast, other children are more impulsive; they select and report solutions quickly with minimal concern for accuracy. The result of research studies show uncertainty of relationship between reflection and impulsivity though some researchers hypothesised that impulsive children are more creative than reflective children.

WHY WAS THE STUDY DONE?

The study tried to answer these questions:

Is young children's musical attainment related to their reflectivity/impulsivity?

. Is young children's musical creativity related to their reflectivity/impulsivity?

Is young children's musical attainment related to their reflectivity/impulsivity?

HOW WAS THE STUDY DONE?

Thirty-four second graders of middle-class background took a test in which they vere to match familiar figures identify similarities from alternatives. Children who took longer time and made fewer errors were classified as "reflectives". Those who took shorter time and made more errors were the "impulsives". Both groups were then tested for both attainment and creativity in music in four dimensions: (1) Musical Extensiveness (2) Musical Flexibility (3) Musical Originality (4) Musical Syntax.

WHAT WERE THE FINDINGS?

. Reflective children did better than impulsive ones in the tonal test but not in the rhythm test.

. Reflective and impulsive children did equally well on the musical creativity test.

- Children's musical creativity was not related to their musical achievement.

IMPLICATIONS FOR MUSIC TEACHERS

Music teachers need to watch out for those young children who tend to react impulsively. By training them to hold back their responses and by providing them with feedback, such children can do better with the tonal aspect of music.

Do not mistake children's musical ability and knowledge as musical creativity: they are not related at this young age.

In addition to improving children's musical attainment, continue to encourage children to respond to music in a creative manner.

LEARNED HELPLESSNESS AND SCHOOL PERFORMANCE

by Tey-Phoon Sau Hing

Abstract by Maureen Ng

WHAT IS THE STUDY ABOUT?

"Learned helplessness" refers to a psychological condition that may result from a student's past experiences of failure in school. Students who are "learned helpless" will develop low expectations of succeeding in the future, feel that success is not something within their control and show diminished motivation to study. They are likely to attribute their failures to their personal deficiencies and their successes to external factors, **e.g.** good luck or easy tasks.

This study looked at learned helplessness in Normal (N) course pupils. Questions like 'Does learned helplessness exist among non-achieving students?' and 'Does learned helplessness affect these students' perceptions of their academic ability and **performance?'** were examined.

HOW WAS THE STUDY DONE?

° A sample of 307 Secondary 4 **'N'** students from eight schools were divided into two groups (non-achievers and achievers).

° All the students completed a learned helplessness questionnaire, which measured their
   a. perceptions of the causes of success and failure,
   b. expectations of future success, and
   c. perceived competence at various subjects.

   The seores of the non-achievers and achievers were tested for significant differences. This was to determins if the non-achievers were more learned helpless than the achievers.

° The scores were also correlated with the **students'** school and GCE **'N'** level grades. The purpose was to determine if learned helplessness affected academic performance.

WHAT WERE THE FINDINGS

° There was no significant difference in the learned helplessness scores of the non-achievers and achievers. The reasons the two groups of students gave to explain their success or failure did not differ significantly.

° Success and failure were attributed mainly to the extent of effort the students put in. Both groups did not think that luck was a factor in academic success or failure, nor did they blame teachers for academic failure.

° When asked if they expected to succeed in the 'N' level examination, the achievers were significantly more confident than the low-achievers in mathematics. However, in English Language, both groups showed low confidence that they would succeed.

° The students tended to link academic success and failure to English competence more than the other subjects. This indicates that learned helplessness may be subject-specific. In Singapore, learned helplessness may be more evident in relation to English Language performance.

SOME IMPLICATIONS FOR TEACHERS

° General learned helplessness does not seem to be present among the 'N' course students. They do have opportunities for success in later life and teachers can help by giving them academic and moral support at this stage o,f their development.

'N' course teachers have to be particularly careful in their selection of content and learning activities. There should be a balance between goals that are demanding and attainable to reinforce the belief that success is achievable with effort.

° Since 'N' course students do tend to underestimate their academic abilities and are least confident in English Language, teachers have to play an important role in developing their general confidence and, in particular, their competence in English.

This is an abstract of Phoon Sau Hing's M.Ed. dissertation (National University of Singapore) entitled 'The Influence of Learned Helplessness on School Performance of Secondary Four Normal Course Pupils' (1987). A copy of the dissertation is in the IE Library.

SCIENCE PROCESS SKILLS
IN PRIMARY SCHOOLS

By Jane K. Singham

Abstract by Ruth Chellappah

WHAT WAS THE STUDY ABOUT?

One of the four aims of the primary science syllabus is to help each pupil use science process skills (such as recall, observations, recording, interpreting, measuring and handling of materials and equipment). The researcher wanted to know whether the science process skills in the CDIS Primary Science Project (PSP) curriculum material have been correctly interpreted and effectively implemented by thirty selected teachers in their classrooms, as intended.

HOW WAS THE STUDY CARRIED OUT?

The researcher used an eclectic approach, borrowing from various methodologies and theories. Thus a systematic classroom observation schedule was used together with observation notes of science lessons that focussed on process skills being used and developed during the lesson. A video tape, showing children working with process skills, was used as a focus for teacher interviews. (This helped to link field notes with observed data and CDIS survey data.) A teacher questionnaire was used to ascertain teachers' priorities in science teaching as well as their understanding of the skills being investigated.

WHAT WERE THE MAIN FINDINGS?

The findings showed that:

teachers perceived the objectives of PSP as a "hands-on" activity-oriented project and that classrooms had moved from a chalk-and-talk experience of the past to one where children were involved in science activities.

in most classrooms, only a few of the science process skills were being practised. The idea that older children would use more "integrated process skills" as stated by PSP, was not seen in the study, as there was not much variation in the development and use of process skills from P4 to P6.

teachers appeared to be working closely with the PSP materials, giving overall the same relative emphasis to different process skills as was intended in the PSP, eg. the skill of observation was highly emphasised, while those of raising questions and planning their own investigations were little emphasised both in the PSP curriculum and in what was implemented.

teachers tended to have a set approach and did not vary their teaching styles from lesson to lesson in accordance with the demands of the content/activities/appropriate process skill to be developed.

° teachers were very dependent on the PSP teachers' guides and tended to become involved in classroom interactions themselves rather than listening to and monitoring their pupils' activities.

WHAT WERE TEACHERS' PERCEPTIONS/CONSTRAINTS?

Most teachers liked teaching science. The centralised national science syllabus, the pressures of completing the syllabus and preparing pupils for an examination, appeared to be the major constraints on primary science teachers. Major obstacles perceived by teachers were class size, lack of time within the school time-table, the childrens' lack of fluency in the English language (being a handicap in oral communication and discussion) and parental pressures for good examination results. Lack of classroom space and resources were not perceived as problems.

WHAT ARE THE IMPLICATIONS FOR TEACHERS?

Overall, the study has shown that there was a tendency for teachers to underestimate the capabilities of Singapore children. Teachers should understand that children are capable of using process skills and can be analytical and critical and are able to communicate their ideas (within their functional vocabulary) when the opportunity was provided for them to do so.

As the teachers felt that the PSP materials were process skills oriented, but perceived the examination to be content orientated, this raises doubts as to whether pupils would have the opportunity to develop higher order process skills.

Teachers will need to work with materials that are not so highly prescriptive if they wish to use practical work to make children think. There would have to be more provision in classroom for working with the children's own ideas, allowing children to raise their own questions and design their experiments.

PRAISING PUPILS EFFECTIVELY

by Edmund T. Emmer

Abstract by Tan Tai Wei

THE STUDY

This article is a review of thirty-four research reports, in the form of books and papers published in America mostly in the last ten years, on the effects of praise on pupils.

The areas investigated included how pupils perceive praise, and how this influences the way pupils are motivated by praise and therefore its effectiveness in promoting pupil learning.

THE MAIN FINDINGS

Some psychologists tell us that praise reinforces behaviour by simply associating the pleasure of reward with the behaviour. But the researches reviewed show that praise does not work in such mechanical made-to-measure fashion. The pupil does not respond mindlessly to the external stimuli of praise. Depending on how he perceives praise, i.e. the meanings that he reads into it, praise can have different effects on a pupil's learning, not all of which are positive.

Older pupils, beyond eight and nine years old, are especially sensitive to the different ways a teacher's praise can be interpreted. Thus it has been shown that when teachers praise such pupils too generously for easy tasks, they interpret the praise as indicative of low ability. This discourages the pupils and they lose confidence in themselves. On the whole, the researches show that praising has positive effects on pupils only when it is not superficial ('good' or 'well-done') conveying little meaning. Effective praise should specify what is good and correct about the tasks and suggest what can be done to improve it. It should stress pupils' skills and competence, and provide guidance for additional learning.

Providing such information serves to relate the praise to the nature of the task. This is important as other researches show that rewards can produce the negative effect of distracting pupils from the task. Pupils go for the reward, and lose interest in the task when the incentive is removed. This finding explains why praise should not be an uninformative remark, such as 'nicely done!'. For such a verbal kiss, however passionate, would be more like a reward that has no intrinsic relation to the task itself.

IMPLICATIONS FOR TEACHERS

The research findings remind us that our pupils have active minds that are constantly reading meanings into what we do as teachers. Therefore when we praise them (or do any other thing with them) we must be sensitive to the possible understanding or misunderstanding that they could have about what we do and intend. Only then can we judge when and how to praise pupils in order to achieve what specific effects with them. The findings that praise can have negative effects on pupil learning should especially alert us to possible unintended messages our praises could send.

In all this, we should also bear in mind that such researches can only document general tendencies of pupil responses to praise. We cannot use their results generally without considering the uniqueness of our own specific classroom situations and our individual pupils. Different pupils may perceive the same thing **differently or respond differently to the same perception. Different situations could influence pupil perception differently, and foster different responses.**

This is why some of the researches show that praise is more effective in accomplishing the teacher's intention when it is given during personal contacts with pupils when the uniqueness both of the situation and the individual pupil can be attended to.

This is an abstract of 'Praise and the Instructional Process' by Edmund T. Emmer, Journal of Classroom Interaction, 1987/88, 23(2): 32-39.

HUMOUR AND CREATIVITY

by Avner Ziv

Abstract by Low Guat Tin

PURPOSE OF STUDY

The positive value of humour in relieving tension and as a defence mechanism has been explored. This study is an attempt to investigate the relationship between humour and creativity.

HOW THE STUDY WAS CONDUCTED

Two **subtests** of verbal activities from two parallel forms (Forms A and B) of the Torrance Creativity test were administered to 282 tenth graders (equivalent to secondary four).

Three weeks after Form A of the Torrance Creativity test was administered, subjects completed Form B of the test. However, half the pupils completed Form B only after they were exposed to a humorous stimulus--a long playing record of the most popular comedian in Israel.

THE FINDINGS

*   Exposing adolescents to humorous stimuli'increases creative **thinking,** including divergent thinking, as measured by a creativity test.

IMPLICATIONS FOR TEACHING

*   To increase divergent thinking or **creativity** in the classrqom, teachers could find ways of introducing humorous stimuli **(e.g.,** cartoons, jokes) **in** their **lessons.**

*   As the discriminate use of 'humour and shared iaughter can also '(a) contribute'to a more relaxed classroom atmosphere, (b) encourage pupils to be freer and less conventional in their expression, (c) increase group cohesiveness which in turn reduces social anxiety, a knowledge in the use of humour would appear to be an important tool for all teachers to acquire.

*   Teachers could show that they care and understand the stress
        and pressures experienced by their pupils by using humour
        either as a teaching tool or in the work they set for the
        pupils or even in setting humorous examination questions.
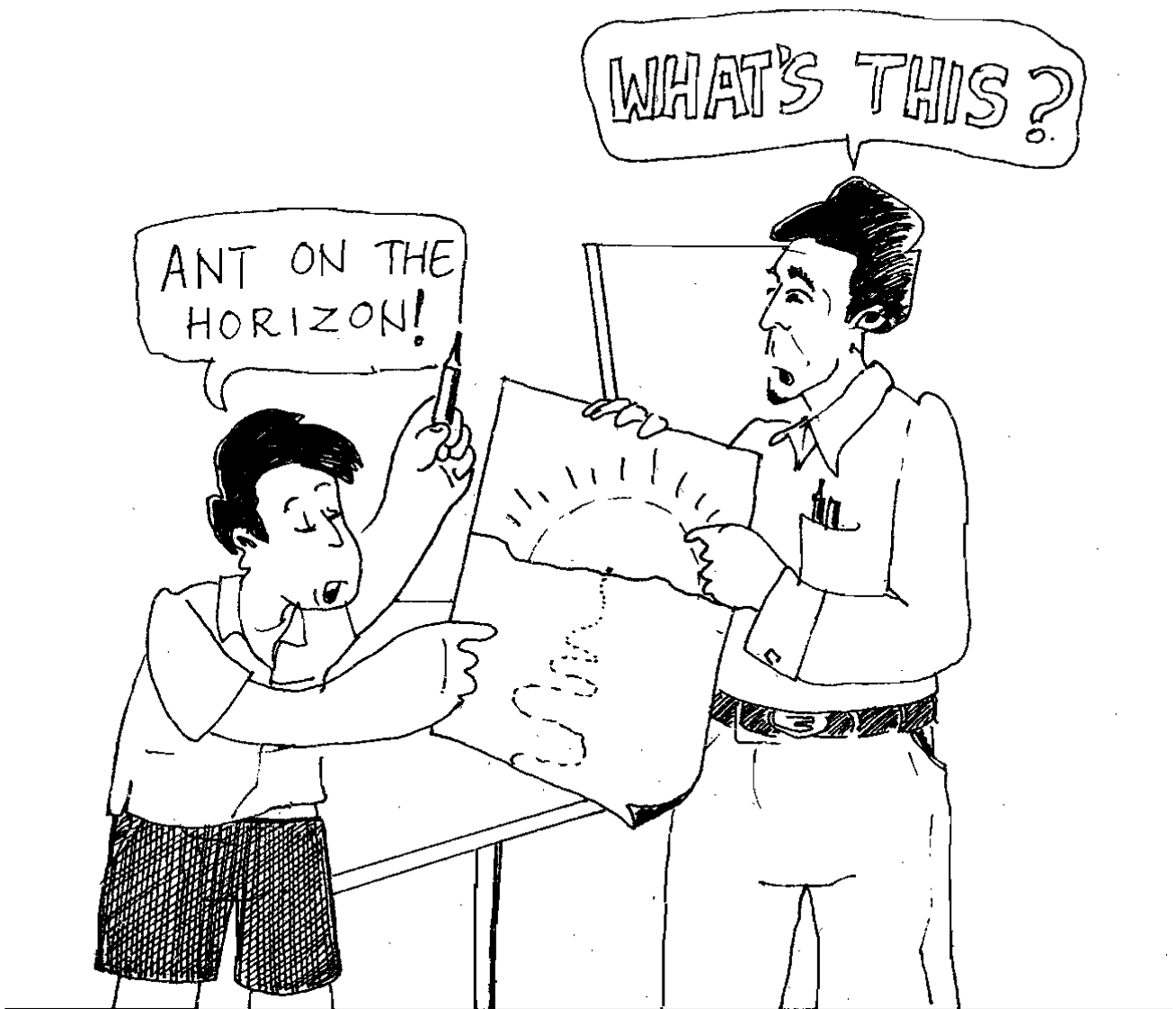
CAREER DEVELOPMENT
OF SECONDARY SCHOOL PUPILS

by Esther Tan

Abstract by Esther Tan

WHAT WAS THE PURPOSE OF THE STUDY?

This study was conducted in schools to investigate:
* the status of career guidance in Singapore schools,
* the degree of parental involvement in the career planning of secondary school students, and
* the career self-concept of these students.

HOW WAS THE STUDY DONE?

The sample comprised 980 Express Stream pupils from 14 secondary schools and 400 pre-university students from three junior colleges, making a total of 1380 pupils.

A questionnaire was administered to these pupils in groups of 40 in their respective **schools/junior** colleges. The data collected were then analyzed and comparisons made between the age groups and gender groups.

WHAT WERE SOME OF THE FINDINGS?

The results revealed a lack of systematic career guidance in the schools surveyed. Only 33% of the students had taken part in career guidance activities organized by their schools, the most common being career talks **(20.9%)**, use of films and print materials (9.4%) and visits to industries (9.2%). Teachers were rated as the least helpful resource persons in their career planning and were consulted by only 25% of the sample, most of them being girls from the upper secondary classes.

At the home front, there was minimal parental involvement in the career planning of these adolescents. More mothers (12.1%) than fathers (9.4%) were consulted and older pupils from the upper secondary classes were more inclined to consult their parents about their career plans. Parents who were consulted aspired to professional jobs for their children, regardless of their own occupational status and their children's academic abilities. The pupils, on the other hand, seemed rather independent when it came to making career plans and did not feel obliged to please their parents.

The majority of the pupils were preoccupied with educational planning such as choosing schools and deciding on subject specialization. Only 42.5% had given some thought to their future careers. Among these, many felt that they did not know enough about their own vocational interests and abilities to make a wise choice about their future careers. Neither did they have sufficient knowledge about the world of work to make realistic career plans.

In anticipating their entry to the world of work, the pupils' greatest fear was tough competition from others, followed by a general concern about their lack of training and lack of experience.

HOW CAN SCHOOLS HELP?

Schools can help by implementing career guidance as part of the pastoral care programme to cater to the career developmental needs of the different age groups.

Career guidance is helpful only when it is relevant to the status of the pupils' career development. Younger pupils from lower secondary classes would benefit from career guidance programmes that are designed to enhance their career self-awareness. For older pupils from upper secondary classes and junior colleges, however, it would be more appropriate to help them clarify work values and develop career decision-making skills.

To enhance the effectiveness of career guidance programmes, schools must make an effort to involve parents in the career planning of their children.

This abstract is based on the doctoral research (University of Toronto) of Esther Tan entitled "A Study of the Career Development of Secondary School Pupils in Singapore". A copy of her thesis is available in the IE Library.

4. Please indicate the extent to which you have found each of the abstracts INTERESTING and USEFUL.

	Not read	Not Interesting	Interesting	Very Interesting	Not Useful	Useful	Very Useful
(1) Reaction to Research	( )	( )	( )	( )	( )	( )	( )
(2) Getting Parents	( )	( )	( )	( )	( )	( )	( )
(3) Out-OF-School Activities	( )	( )	( )	( )	( )	( )	( )
(4) Bilingual Education	( )	( )	( )	( )	( )	( )	( )
(5) English in Singapore	( )	( )	( )	( )	( )	( )	( )
(6) Understanding of	( )	( )	( )	( )	( )	( )	( )
(7) Effects of Children's	( )	( )	( )	( )	( )	( )	( )
(8) Are Reflective Children	( )	( )	( )	( )	( )	( )	( )
(9) Learned Helplessness ...	( )	( )	( )	( )	( )	( )	( )
(10) Science Process	( )	( )	( )	( )	( )	( )	( )
(11) Praising Pupils	( )	( )	( )	( )	( )	( )	( )
(12) Humour and	( )	( )	( )	( )	( )	( )	( )
(13) Changing Teaching	( )	( )	( )	( )	( )	( )	( )
(14) Career Development	( )	( )	( )	( )	( )	( )	( )
(15) Say; Research	( )	( )	( )	( )	( )	( )	( )

THANK YOU FOR YOUR COOPERATION

Dear Fellow Professional

<u>React to REACT</u>

Now that you have read REACT, we hope you will share with us some of your views so as to help us improve REACT. Please therefore complete the reactionnaire and return it to us through your principal at your earliest convenience.

Also, please answer the following questions:-

1. Are you a JC/Secondary/Primary teacher? _____

2. How long have you been in the service? _____ years
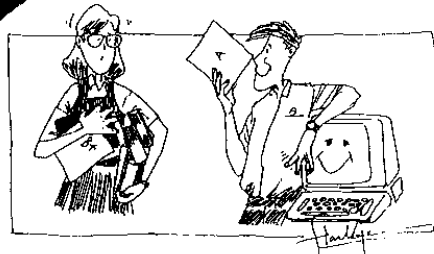
3. What main subject(s) do you teach? _____

_____

Thank you.

THE EDITORIAL BOARD

<u>REACTIONNAIRE</u> .

1. How do you find the language on the whole?

   Reasonably   Some   Too
   readable (   )   difficulty (technical (   )

2. What themes/topics would you like to see in future issues of REACT?

   _____

   _____

3. In what ways can REACT be improved so as to meet the needs of classroom teachers more satisfactorily?

   _____

   _____

   _____

College students who studied calculus concepts using graphical and symbolic-manipulation computer programs showed better understanding of the concepts and performed almost as well on a final exam of routine skills as a class who had practised the skills for the same period.

K.M. Heid. (1988). "Resequencing skills and concepts in applied calculus using the computer as a tool." *Journal of Research in Mathematics Education* (19, 1:3-15).
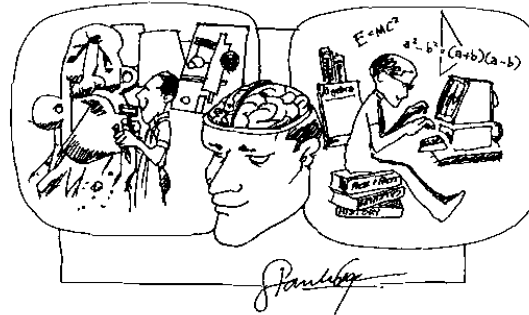
School may be a frustrating, miserable place for a strongly right-brained child, particularly in mathematics. Such a child has difficulty gathering information solely from verbal and symbolic sources, and is frustrated at being required to master bits and pieces when not been shown how they fit into a whole.

J.L. Creswell, C. Gifford, & D. Huffman. (1988). "Implications of right/left brain research for mathematics educators." *School Science and Mathematics* (88, 2:118-131).


A large majority of the students felt that mathematics is rule based, and about half of the students reported that learning mathematics is mostly memorizing.

C.A. Brow, T.8. Carpenter, V.L. Kouba, M.M. Lindquist, E.A. Silver, & J.O. Swafford. (1988). "Secondary school results for the fourth NAEP Mathematics Assessment." *Mathematics Teacher* (61, 5:337-347).


"Personalized basal stories raised reading scores of poor readers in one elementary school."

Bruce A Braden. (1982). "Effect of personalised basal readers on the reading comprehension of fourth-grade poor and average readers." *Contemporary Educational Psychology* (7:320-324).
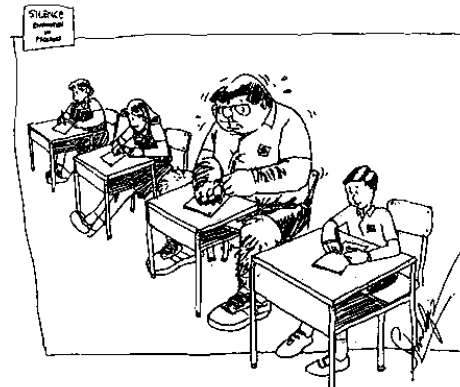

Conditions giving rise to different test anxiety levels include ability, sex and school grade level.

Agnes Chang. (1979) "Anxiety and academic achievement". *New Horizons* (20 142-153).
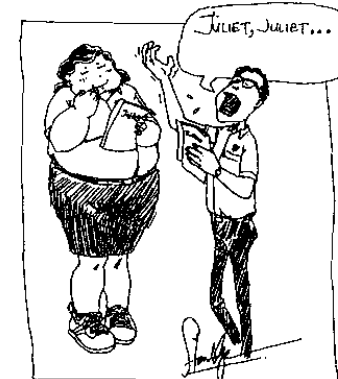

When children know that they are going to dramatize a story, they read it with an intensity that you don't often see otherwise. When children know that they will get to give life to the characters, they really try to relate to them.

Bill Harp. (1988). "Is all of that drama taking valuable time away from reading?" *The Reading Teacher* (41, 9:936-939).
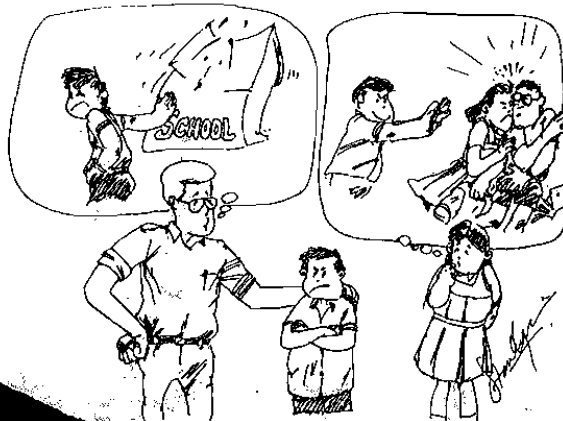

While teachers and counsellors were concerned about the alienation of students in schools, the students themselves identified disruptive behaviours as the most serious problem.

Jean Wilson. (1987). "Children's behaviour problems as viewed by students, teachers and counsellors". *Journal of Humanistic Education and Development* (26, 1:24-31).
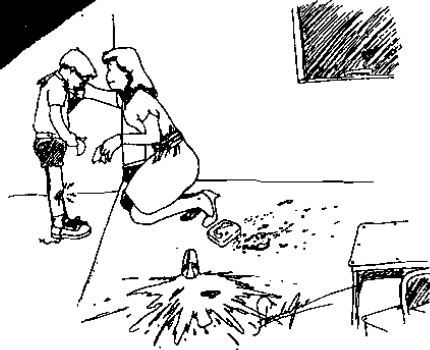
Optimal classroom interaction demands that teachers be emotionally and physically available in their interactions with students.

Thomas Wiggins & Linda M. Chapman. (1987). "The affective context of classroom interaction". Journal of Humanistic Education and Development (26, 2:64-71).
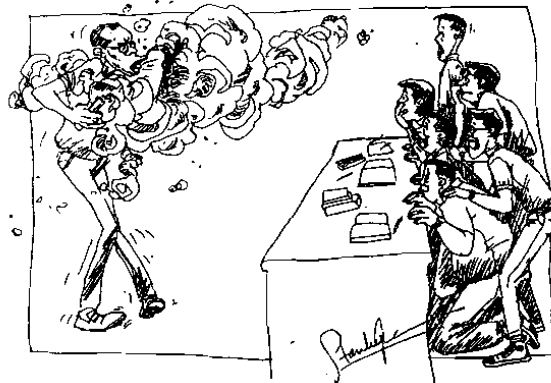
Figures suggest that facts-oriented science programmes have fallen in the estimation of students looking back on them. Students' attitudes towards concept-orientated and process-orientated programmes remain very positive and popular.

W. R. Reese. (1984) "Method study: seven years later". Science and Children.

Children in multilingual settings show consistent advantages in the use of language as a tool of thought.

Joseph Foley (1988). "Multilingual settings on the cognitive development of children: Studies from the Singapore/Malaysia context". In V. Bickley (Ed) Languages in Education in a Bilingual or Multi-lingual Setting. Hong Kong: Institute of Language in Education.

Two of the major goals of education in general, and of social studies in particular, are education for citizenship and development of the ability to think critically. Research indicates that critical thinking has indirect positive effects on orientations towards political participation and that critical thinking positively affects personal growth, political efficacy and democratic attitude.

Edith M. Guyton. (1988). "Critical thinking and political participation: Development and assessment of a causal model". Theory and Research in Social Education (15, 1:23-49).

Observations are a basic science process skill. They are also basic learning skill. It is possibly how young children learn language. In fact, it is hard to imagine learning anything without somehow using observations.

M. R. Cohen. (1983) "Preservice and inservice training of science teachers." In P. Tamir A Hofstein and M. Ben-Peretz (Eds) Rehovot, Israel: Balaban International Science Services.

Research supports the idea that a history teacher's interpretation of the past strongly influences students' conceptions of the meaning of history.

Ronald W. Evans. (1988). "Lesson from history: Theacher and student conceptions of the meaning of history." Theory and Research in Social Education (15, 3:203-225).
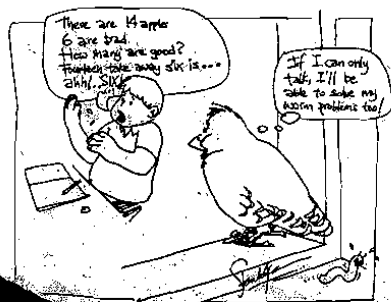
Verbalizing aloud while solving problems can help in problem solving performance.

D. H. Schunk, & P. D. Cox (1986) "Strategy training and attributional feedback with learning disabled students". Journal of Educational Psychology (7, 8: 201-209).