Teacher Selection Research: The Singapore Experience

Soh Kay-Cheng
Ho Wah Kam

ABSTRACT

Teacher selection has been an area of concern to teacher educators for over half a century. In the Singapore scene, a series of research studies in this area was embarked on at the Institute of Education nearly one decade ago. This article summarizes many of studies done and points up possible new directions.

Keywords: Teacher selection, Teacher personality, Teacher attitudes.

The Background: Mainstream Research

Readers of the Holmes Report “Tomorrow’s Teachers” (Holmes Group, 1986) would recall that maintaining defensible admission requirements to teacher education programmes was one of the targets to be achieved in that report. The concern in the US has been with what were regarded as declining standards of admission, and the lack of more definite information about reliable predictors of work success in teaching. For example, after an extensive review of teacher effectiveness research, Schalock (1978:71) concluded that “research on teacher effectiveness has little to contribute to decisions about who should enter the teaching profession”.

Nonetheless, tertiary institutions in the US have continued to maintain the standard admission procedures. In fact, according to Pugach (1984), there has been little change over two decades (1957 – 1978) in the way students have been admitted to education programmes in American universities. The data (see Table 1) taken from a survey of one to two thousand universities speak for themselves: other than GPA (minimally 2.0 on a 4-point scale), which represented academic ability as the single most popular criterion used, the other measures included aptitude (intelligence), oral proficiency, communicative proficiency, and performance at an interview. For

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Universities surveyed</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade point average</td>
<td>2165</td>
<td>78.7</td>
</tr>
<tr>
<td>Communicative proficiency</td>
<td>1619</td>
<td>51.5</td>
</tr>
<tr>
<td>Speech proficiency</td>
<td>1619</td>
<td>42.7</td>
</tr>
<tr>
<td>Interviews</td>
<td>1594</td>
<td>38.9</td>
</tr>
<tr>
<td>SAT/CAT</td>
<td>1076</td>
<td>36.1</td>
</tr>
<tr>
<td>Personality testing</td>
<td>1685</td>
<td>34.5</td>
</tr>
</tbody>
</table>

Note: Re-worked from Pugach’s (1984) Table 1.
personality testing, standardized tests such as the Sixteen Personality Factor Questionnaire, Minnesota Multiphasic Personality Inventory, Minnesota Teacher Attitude Inventory were frequently used, sometimes in conjunction with other informal, personal interviews.

Pugach (1984:1555) pointed out the limitations of the then prevalent admission selection policies employed by American universities for education majors. Among the limitations were:

(a) that candidates develop and change during the course of their preparation owing to personal development and programme impact, and

(b) that the measures used are incompatible with the notion of early selection, whereas success as a teacher is best assessed using variables which have fidelity to the complex context of a classroom.

Having considered the limitations and reconceptualized the selection process, Pugach proposed four selection criteria. — basic skills in reading, mathematics and written communication; a reasonable minimum GPA, to be accompanied by additional measures to build a candidate’s profile; personal qualities determined through a structured interview by permanent faculty members; and developmental maturity, which might indicate the extent to which the candidate will function successfully in the programme.

In a more recent paper, Howey and Strom (1987:1) suggested that the two “more intelligently and morally defensible questions” pertaining to teacher selection would be:

1. What type of person do we value as teacher?
2. What does the answer to question 1 suggest about pre-service selection (and retention) policy and practice?

They pointed out that there was a lack of clear conceptions of a teacher or teaching and further asserted that even if such conceptualization occurred, the emphasis was on the technical dimension of teaching and not upon the multidimensional aspects of the teaching role or the personal qualities. In turn, Howey and Strom (1987:10) proposed a multivariate model which takes into account, the possible interactions among personal, contextual-environmental and behavioral outcome variables. In contrast with the then prevalent practice, the model proposed by Howey and Strom underlines the need for a conceptual shift, in the sense that personal qualities are given due emphasis for their own value rather than merely as predictors of technical competence taken as the sole goal of teacher selection. To the two authors, “selecting prospective teachers involved conceptualization of teaching (and learning) and, also, a consideration of the personal qualities considered desirable in teachers”.

In a separate review of the research on teacher selection, Applegate (1987:5) concluded with another set of questions, to which reference will be made when local research is discussed in the second half of his paper. The questions are:

1. What constitutes aptitude for teaching?
2. What implicit beliefs, understandings, or dispositions undergird current admission into teacher preparation?
3. What organisational or procedural dimensions exist to enhance or inhibit selective admission?
4. What lessons might be learned from other professions which employ selective admission strategies?
5. What relationships exist among entry criteria, programme goals and exit criteria?

Local Research

Beginning in 1983, the Institute of Education in Singapore embarked on a series of empirical studies on teacher effectiveness through four broad-based projects (Sim, 1983), two of which were of immediate relevance to teacher selection, namely the Assessment of Teacher-Trainees (ATT), and the Alternative Selection Criteria (ASI) projects.

The (ATT) project was considered necessary because “the lack of a satisfactory moderation system across lecturers in any particular assessment, such as teaching practice, for which inter-rater or even intra-rater reliability is somewhat low, is a continuing bugbear of the system” (Sim, 1983:105). This series of ATT studies which included surveys, analysis of the nature of the examinations, and experiments have been summarized and discussed by Soh (1990). The series of ASI studies are summarised in the next section.

Alternative Selection Criteria (ASI) Project

The ASI project was undertaken for the reason that “so far, IE has tended to adopt mainly academic criteria for the selection of students and
it is hoped that alternative or additional criteria could be tried out and applied if they are reason-
ably valid and reliable” (Sim, 1983:105). In
essence, the ASI project looked into the efficacies of two well-researched instruments in predicting
teaching effectiveness, namely, the Sixteen
Personality Factor Questionnaire (16PF) and the
Minnesota Teacher Attitude Inventory (MTAI).
In addition, an attempt was made to develop a
local educational attitude scale.
The first ASI study, reported by Yip (1982),
compared the responses to the MTAI of 104
effective and 75 non-effective teachers. Teacher
effectiveness was defined in terms of 38 prin-
cipals’ assessment on personal qualities of the
teachers’ (e.g. sense of responsibility, dedication,
self-motivation), relationship with pupils and
colleagues, professional attitude and behaviour,
and self-improvement. It was concluded that
“it is not possible to correlate MTAI scores
with principal’s ranking. For this to occur, the
MTAI must be re-standardized for local use, and
principals must nominate effectiveness teachers
based on the latter’s’ relationship with his
pupils” (p. 13).
In a more comprehensive report, Eng et al.
(1983) presented the findings of a study on the
efficacy of MTAI when used with primary (n=143)
and secondary (n=30) teachers from 37 schools.
These teachers were classified as effective and
non-effective according to their principals’
assessment on personal qualities, interpersonal
relationships, professional attitude and behaviour,
and self-improvement. Contrary to Yip (1982),
Eng et al. concluded that the MTAI did dis-
criminated between the effective and the
non-effective teachers. An interesting interaction
effect was found as the MTAI discriminated
between effective and non-effective female but
not male teachers. It was also observed that 36
MTAI items penalized teachers if they did not
agree or disagree strongly with the statements. Item-
analysis showed that 34 of the MTAI items
appeared to discriminate the most effective teachers
from the least effective ones.
Wong (1984) looked into the efficacy of the
items identified in Eng et al.’s study as discrimi-
nating between most and least effective teachers.
In this analysis, the effective teachers were
classified under three groups in terms of principals’
assessment. The non-effective teachers were
likewise classified. Comparisons showed that the
selected MTAI items discriminated not only among
the six groups but also among the three groups of
effective teachers.
The 34 MTAI items were subsequently admin-
istered to a group of Diploma-in-Education
students (Wong, 1984b). These selected items, as
a whole, discriminated significantly, students high
(i.e. scoring distinction and credit) in course
performance and those low (pass) in perform-
ance. A significant mean difference was found
in favour of the high scorers. A comparison was
also made between effective (A to B+) and non-
effective (C, C-) students. Again, a significant
mean difference was found in favour of the effective
students.
Subsequent to the above studies, the MTAI was
administered to 402 Diploma-in-Education
students in 1983 (Yip, 1985). In terms of the
aggregates of course grades, 43 highs and 53
lows were identified and compared on their
means for various sets of MTAI items (150, 51, 34
and 19). For all sets of items, the groups differed
significantly.
The ASI Project also looked into the efficacy of
the 16PF in predicting teaching effectiveness.
Tay-Koay (1985) reported a study which involved
372 students. Students with high teaching
practice grades differed from those with low grades
on two of the 16 personality traits. Highs scored
higher to Factor C but lower on Factor O,
indicating that they were emotionally more stable
and much more confident. It was also reported
that overall course performance correlated
positively with Factor B (Intelligence) and Factor
C (Emotional Stability) and negatively with Factor
L (Paranoid Tendency), Factor O (Anxious
Insecurity) and Factor Q4 (Somatic Anxiety).
The ASI Project also attempted at developing a
local scale for measuring educational attitude.
Tan (1985) developed a 30-item educational scale
which covered four aspects: effective teaching
and professional image; teaching as a profession;
children and teacher-pupil relationship; and,
interpersonal relationship with colleagues and
superiors. Based on course aggregates, studentsin
the top 10% scored higher than those in the
bottom 10% on the scale. Based on the teaching
practice grade, those awarded A or A scored higher
than those awarded C or below. Eight of the 30
items were found to have positive correlations
with both course aggregate and the teaching
practice grade.
**Input-Throughput-Output One (ITO1) Project**

The two earlier projects (ATT and ASI) dealt with two key points — the entry and exit points, in teacher education programmes offered at the Institute and thus, might provide partial answers to some of the questions posed by Applegate (1987). In 1988, with the establishment of the Institute's Educational Research Unit, research activities were re-conceptualized and organized (Ho, 1989) under seven Research in Teacher Education (RITE) projects. Of these, the ITO1 Project is the object of the present discussion.

The ITO1 Project, in a sense, merged the two projects mentioned above under a new conceptual framework using different techniques for analysis, and at the same time, inherited the data collected for the ASI project. In brief, the ITO1 project adopts a multivariate approach in analyzing existing and new data and continues to search for predictors that may be useful as predictors of teacher effectiveness. Various reports emerging from the new project are summarized below and will be subsequently discussed in the hope that some insights into Applegate's (1987) questions can be obtained and the future direction of such research, at least at the Institute, can be determined.

The ITO1 Project was carried out to answer principally the two research questions below:

1. How predictive are existing selection criteria of performance in the pre-service programme and subsequently in school?
2. How do additional/alternative selection criteria compare with existing criteria in predicting performance in the pre-service programme and subsequently in school?

To guide this long-term study, the conceptual framework below has been followed:

![Conceptual Framework](image)

In this model, **cognitive predictors** are academic qualifications such as degree type, A-Level aggregate, General Paper grade, O-Level English grade, and scores obtained from a battery of English Proficiency Tests. **Affective predictors** refer to selected 16PF and MTAI items and other measures of personal qualities considered relevant to teaching. **Course performance** is operationally defined in terms of grades obtained for the various components of the programme, including theory and practice assessment. **Performance in school** is assessed in terms of the school principal's ratings.

The ITO1 Project has basically two aspects to work on, that is, the measurement and the substantive aspects. The measurement aspect is to search for suitable measures which are likely to serve as predictors of teachers' effectiveness. For this, use was made of studies in scale development which took place independently before the project was conceived.

The first of these is the development of a scale to measure teachers' attitude towards responsibility (Soh, 1985), together with two other scales measuring teachers' attitude towards change and their teaching behaviour. Since the implementation of the New Education System, beginning with the secondary schools, in 1980, there has been a series of wide-encompassing changes in the education scene in Singapore. The success of these changes depends on, *inter alia*, the teachers as implementers. Their attitudes towards
change, their sense of responsibility, and their teaching behaviour can be expected to have no small effects on the intended changes introduced into the system for the better. It is a common experience of programme and curriculum evaluators that relevant, reliable and valid measuring instruments are hard to come by. An attempt was therefore made to fill this gap by developing three new scales for measuring these attributes.

The Responsibility Scale has 20 Likert-type items. Of these, item-analysis showed showed 14 of the 20 items discriminating between highs and lows significantly, with point-biserial correlations varying from 0.23 to 0.65, with a median of 0.41. The internal consistency was evidenced by a high Cronbach alpha of 0.79. Scores on this scale correlated positively with educational attitude and locus of control but negatively with Machiavellianism. There were positive correlations between attitude towards responsibility and attitude towards change as well as teaching behaviour.

Another measure which was extensively studied is the locus of control scale for teachers. The construct of perceived efficacy or locus of control has been extensively studied over the past 30 years in contexts other than teacher education. It is in more recent years that attention has been paid to teachers' perceived efficacy or internality. To the extent that it indicates a psychologically healthy personality, teacher locus of control should be of not only theoretical but also practical interest to teacher education institutions. An attempt (Soh, 1988a) was made to establish the validity of teacher locus of control as measured by a Likert-type scale developed in America and adapted for Singapore use.

The scale was completed by 50 experienced teachers participating in a classroom-based research workshop. They were classified as internals and externals according to whether they scored high or low scores. The discriminant analysis was run and the results showed no misclassification. This 20-item scale had an adjusted coefficient of multiple determination of 0.98, and a Cronbach alpha of 0.68. Items with negative coefficients were then eliminated from the second run which yielded quite similar results. The resultant coefficient of multiple determination remained as 0.98 but the Cronbach alpha increased to 0.89. The Mahalanobis distance of the two versions were not significantly different, suggesting that the shorter 17-item scale was just as effective in discriminating the internals from the externals.

A second study involved 40 secondary teachers rated by their principals as more or less effective on their overall performance considering both classroom and out-of-class effectiveness. The first run of discriminant analysis of the full scale of 20 items showed a misclassification of 12.5%, with a multiple coefficient of multiple determination of 0.89 and a Cronbach alpha of 0.79. When the 17-item scale was used, the misclassification increased to 17.5%. The coefficient of determination was 0.85 and the Cronbach alpha 0.77. Again, here, the Mahalanobis distances were not significantly different; the two versions were equally effective in discriminating the two groups of teachers with differential principal's ratings.

The first ITO1 study (Soh, 1988b) used the data collected by the ASI Project of the 1985 Diploma-in-Education students. Complete data were available for 226 students who took a battery of proficiency tests in English Language, the MTAI and the 16PF. Statistically significant but low correlations were found between these predictor measures and grades for teaching practice, theory, and overall performance. When the students were grouped as high and low in terms of overall course performance, they were effectively discriminated by entry academic qualification, language proficiency, 16PF source traits of intelligence (B), emotional stability (C), and boldness (H). When the students were grouped as highs and lows on the basis of their teaching practice grade, they were effectively discriminated by entry academic qualification, oral fluency, enthusiasm (F), and boldness (H). Students high and low on the theory examination were effectively discriminated by entry academic qualification, language proficiency, MTAI attitude, and intelligence (B).

In a general sense, the results support the suggestion that certain personal qualities differentiate between more and less effective teacher-trainees, beyond what can be predicted by academic qualification. The results also suggest that different aspects of course performance can be predicted by different measures of personal qualities.

Based on the results of the first ITO1 study, academic qualification, oral fluency, language knowledge, and the 16PF source trait, emotional stability (C), were used for further analysis using
multiple regression (Soh, 1989a). For a sample of 226 students, academic qualification and oral fluency consistently contributed to the prediction of overall performance, teaching practice, and theory examination. Language knowledge also contributed to overall performance and theory examination, though not to teaching practice. Emotional stability contributed to teaching practice. The coefficients of multiple determination ranged from 7% to 15%.

For the subsample of 98 Arts students, academic qualification predicted overall performance and theory examination but not teaching practice. Oral fluency predicted overall performance and teaching practice but not theory examination. The coefficients of multiple determination ranged from 2% to 7% only. For the subsample of 99 Science students, entry qualification predicted overall performance and theory examination but not teaching practice. Oral fluency predicted overall performance, teaching practice, and theory examination. Language knowledge also predicted theory examination. Emotional stability predicted both overall performance and teaching but not theory examination. The coefficients of multiple determination varied from 8% to 30%.

As gathered from these results, the situation is clearly more complicated than what one would expect. Prediction was more effective for Science than Arts students, suggesting an interaction effect which has to be taken into consideration. The effectiveness of the various predictors also varies with the criteria.

A third ITO1 study was carried out by Wong (1989) using data collected in 1985. A canonical analysis of the measures taken of the female Diploma-in-Education students was run, with course performance grades as the criterion, including results for theory examination, educational elective, curriculum studies, and teaching practice. Two kinds of predictors were included. The first was a set of cognitive measures including the students' grades or marks for O-Level English, A-Level total, General Paper, degree type, five language measures, and teaching experience. The second set of predictors consisted of the MTAI score (for 45 items selected on the basis of earlier studies under the ASI Project) and eight 16PF personality traits (the same as those used in the first ITO1 study). The personality traits were Intelligence (I), Ego Strength (E), Impulsivity (P), Boldness (B), Suspiciousness (S), Guilt Proneness (G), Self-Sufficiency (Q), and Anxiety (Q).

Two canonical variates were obtained. The first has a correlation of 0.640, indicating that the best weighted combination of predictors explained 41% of the best weighted combination of criteria. The best predictors were degree type, oral proficiency, reading comprehension, low impulsivity, and MTAI score. The best criteria were marks for the theory examination, curriculum studies, teaching practice, and educational elective.

The second canonical variate explains an additional 23% of the variance. The best weighted predictors for this were Intelligence, Anxiety, while teaching practice and educational elective marks made up the criteria set. Wong (1989:8) concluded that the "results are consistent with overseas research on prediction of teacher effectiveness that no test could do a thorough job in prediction of teacher performance; that correlation coefficients between variables and teaching are usually found to be around the region of 0.3, 0.4 and 0.5."

More often than not, studies on teacher selection use those students who have been admitted to the training programmes. This suggests that the distributions of certain relevant attributes might have been consequently truncated by the selection process. This then implies that the predictive power of those attributes with truncated distributions would be lowered due to a statistical artifact. There is also the possibility that, while selecting applicants on certain 'desirable' attributes, applicants with some other equally 'desirable' attributes might be thus excluded. It was with this consideration in mind that a study (Soh, 1989b) was made to compare admitted and rejected applicants.

Comparisons were made of the applicants to the 1988 Diploma-in-Education programme on a battery of personality and attitudinal measures. When compared with applicants who, for one reason or another, did not join the programme (n=192), students who were admitted (n=364) were found, in terms of the 16PF source traits, to be less warm (A), more intelligent (B), less impulsive (P), less bold (H), less rebellious (O) and more compulsive (Q2). They were also more 'external' and held positive responsibility attitude, though
they did not differ from those not in the
programme in attitude as measured by the MTAI.

For the admitted students, there was practically
no significant correlation between personality and
(attitudinal) attributes and academic qualifications (degree type, A-Level aggregate and O-Level
English). It is interesting to note that degree type
correlated significantly ($r=0.27$) with O-Level
English but not with A-Level aggregate and that
there was no correlation between the latter two
measures.

In addition to the above studies, the ITO1
Project tried two other approaches to teaching
effectiveness, though these may not be new. First,
a ‘high fidelity’ measure was piloted (Chua &
Skuja, in preparation). This was a simulated
teaching task which required an applicant for
the 1989 Diploma-in-Education programme to
teach to a group of fellow applicants, a given topic
for five to ten minutes. The topics are specific
‘teaching points’ such as correcting pupil
misconceptions in fractions. The applicant’s
performance was assessed by two independent
lecturers on communication, personality, appearance,
and interaction, using an evaluation form
adapted from the teaching practice assessment
schedule currently in use. While the extent to
which performance in the simulated teaching
task predicts actual classroom teaching remains
to be evaluated, preliminary analysis showed that
inter-rater correlations for the various aspects
were moderate, not greater than 0.40 in general.

The other attempt was to have students watch
and then rate the performance of a teacher in a
video-taped lesson (Wong, in press). In addition
to rating the teaching on aspects like those of the
simulated teaching tasks, the students were asked
to identify and comment on one commendable
feature and one feature that needs improvement
in the taped lesson. The tacit assumption of this
approach was that those who were able to judge
discrimingly were more likely able to perform
better. The ratings will subsequently be correlated
with the students’ teaching practice grade.

Retrospect and Prospect

As hindsight always seems wiser, some issues and
problems encountered in the conduct of the ITO1
studies will be raised and discussed here, without
them masquerading as wisdoms. The more
specific and hence more visible ones will be dealt
with before the more general and fundamental
ones.

First, the selectiveness of the samples deserves
more attention than it has hitherto been accorded
by researchers of teacher selection. It is a truism
that applicants who have been selected into a
teacher education programme tend to be more
homogeneous in the relevant characteristics,
resulting in truncated distributions for the
variables studied. This means that the correla-
tions between the predictor and criterion
measures will normally be underestimated to
some degree and hence, an expectation for more
‘impressive’ predictive power would not be
unrealistic. A related problem is that, as shown in
the study summarized above, there is the possibility
that while rejecting applicants on some grounds
(e.g. having weaker academic qualifications),
the selection procedure may at the same time exclude
applicants possess some desirable qualities that
have a negative relationship with the deciding
factors.

Secondly, the probable interaction effect
between cognitive and affective predictors with
subject specialization is not to be dismissed too
lightly. As the study cited above shows, the same
set of predictors functioned differentially with
groups of students with different specializations.
In other words, the same selection formula may
not be equally effective for selecting applicants
with different subject specialization and the
application of differential weighting may well
enhance the efficacy of prediction.

Thirdly, assessing a large number of applicants
for selection purposes is not only time-consuming
but also labour-intensive. While the dissatisfaction
with paper-and-pencil tests such as personality
inventories and interest scales might have been
exaggerated, faith in the high fidelity or low
inference measures might have been equally
inflated, if not more. While more definite
evidence is awaited, the study in progress cited
above shows that inter-assessor reliability is not
impressively high, which of course will limit
its validity. A related problem deserving serious
consideration is the economy of data collection.
Perhaps, as it is true of many other human endeav-
ours, a compromise between the ideal and the
practical is what is needed. In this regard, the
study on video-taped lessons for students’ rating,
as mentioned above, might provide a partial
answer, should the results turn out to be positive.

Fourthly, researchers of teacher selection are caught at both ends of the prediction formula. On the left side of the equation, the criterion of teaching effectiveness is a perennial controversy and course grades are notoriously unreliable. Moreover, college staff and school administrators do not always look for the same kind of teacher qualities; and, even within teacher education institutions, to be good at theoretical work does not necessarily mean to be so in practical teaching skills at the same time. On the right side of the equation, the choice of predictor measures has been made with more faith than on facts — that academic qualifications and some other cognitive, as well as, personal characteristics should predict teaching effectiveness. Although some correlations between chosen predictors and criteria have been reported in the literature of the past half century, how much of these are the result of a ‘shotgun’ approach is not really known. Until such time when the criterion issue of teacher effectiveness is resolved, the same problem of being caught at both ends of the equation will be with researchers in this area for some time to come.

Finally, the choice of a model calls for attention. Many of the studies on teacher selection adopt the correlational and later, the multiple regressive approaches. While the latter can be considered as an improvement over the former, it still has its limitation in that only one criterion measure is allowed. With this technical and hence conceptual constraint, personal qualities or more specifically affective measures which have been included in studies serve more as a means for improving the prediction efficiency than as ends in their own right. In other words, teacher effectiveness has more often than not been narrowly defined in terms of classroom skills; effective teachers are thus reduced to not more than people with technical competency than people who inspire. This, of course, is a very much broader issue of a philosophical nature which is beyond the scope of this discussion on teacher selection. Obviously, a more complex model, than has hitherto been attempted, needs to be taken seriously, and more sophisticated techniques (eg discriminant analysis and LISREL) may permit such an endeavour to take into account the intricacies among the criterion and predictor variables. However, this may give rise to the issue between administrative feasibility and research sophistication — an issue which deserves discussion in its own right.

In conclusion, it may be said, with some degree of pessimism, that teacher selection research though not exactly like looking for a needle in a haystack is also not very far from it. The complexity of the problem (and the attendant frustration researchers have to endure) is contributed by a host of factors, mainly the elusiveness and ambiguity of the criterion of the effectiveness of a teacher; the remoteness of the predictor measures from the real-life encounters of the teacher; and the specificity and hence, the moderating effect of the teaching environment. Future research in this area may be more fruitful if these factors can be more effectively contained.

Acknowledgements

The authors gratefully acknowledge the support of members of the ITO1 Project in the conduct of the various studies reported here and the generosity of members of the former ASI Project for making available their data and reports.

REFERENCES

Sim, Wong Kooi. (1983) IExaXming and IExpanding IXperience: Delineating IE's present and future roles. In Lun, Chor Yee & Dydley de Souza (Eds.). IExperience: The
First Ten Years. Singapore, Institute of Education.