

English summaries

Jan-Eric Gustafsson & Sven-Eric Reuterberg, 2000: Methodological problems in studies of the prognostic validity of the Swedish Scholastic Aptitude Test (SweSAT) – and their solution! /Metodproblem vid studier av Högskoleprovets prognosförmåga – och deras lösning! Pedagogisk Forskning i Sverige, Vol 5, No 4, pp 273–284. Stockholm. ISSN 1401-6788.

Tests of general intellectual ability have been shown to yield the highest correlation coefficients with success in education and work. Therefore, it may be assumed that the Swedish Scholastic Aptitude Test shows a strong relationship with success in higher education. However, the empirical studies conducted so far have revealed a low or even a non-existent relation between the SweSAT scores and the performance in higher education. Do these results imply that the SweSAT is unable to predict success in higher education? It is still too early to give a definite answer to that question, but we know that the results obtained so far give an incorrect picture of the prognostic validity of the test.

The classic problem in determining prognostic validity is that the criterion is known only for those persons who are admitted, and they constitute a selected sample of all applicants with test scores that are higher and more restricted in range as compared to all applicants. The fact that restriction of range in test scores implies decreased relations with other variables is a well-known phenomenon, and standard procedures are available to estimate the relationship between test scores and the criterion in the unrestricted group of applicants.

Admittance to higher education in Sweden, however, is a more complicated procedure due to the fact that the applicants are admitted either on the basis of their SweSAT scores or on the basis of their leaving certificates from upper-secondary school. This means that the admission procedure is compensatory, and therefore the problem of estimating the correct prognostic validity is not only a matter of restriction of range.

On the basis of simulated data it is shown that in those cases where a small fraction of the applicants are admitted, and, consequently, very high SweSAT scores and very high leaving certificates are required for admittance, the relationship between the SweSAT scores and the criterion among those admitted is severely underestimated. As a matter of fact, in these cases negative correlation coefficients are not uncommon in spite of the fact that the true correlation coefficient among all applicants amounts to 0,45. The relationships between test scores and criterion are underestimated also when

the admittance requirements are more liberal, but not to the same degree. However, the correct relationship is obtained only when all applicants are admitted.

Of course, the prognostic validity of a selection test is not a question of its relationship with the criterion among those who are admitted, but its relationship with the criterion among all the applicants. Thus, the problem is that those not admitted are missing information on the criterion variable. However, in admission to higher education in Sweden all applicants have leaving certificates from upper-secondary school and a great majority of them also have SweSAT scores. By a new statistical method which models incomplete data these known variables make it possible to estimate what criterion scores all applicants should obtain if they had been admitted.

This statistical method has been applied to the simulated data set and new correlation coefficients between the SweSAT scores and the criterion have been computed. These correlation coefficients give a dramatically changed picture of the prognostic validity of the SweSAT.

It should be remembered that the actual correlation between the SweSAT scores and the criterion among all applicants amounted to 0,45, so this is the correct prognostic validity coefficient. The mean value for all the 56 coefficients that were estimated by modeling incomplete data amounted to 0,47. This means that the new method overestimated the prognostic validity by 0,02 – a difference that can be ignored for all practical and theoretical reasons. Not only is the mean nearly perfect, but almost all separate coefficients come very close to the correct value of 0,45 as well.

Thus, the conclusion is that modeling incomplete data is a very efficient method for estimating the actual prognostic validity of selection tests, even in those situations where we have a compensatory selection procedure. The traditional way of estimating the prognostic validity, i.e. for only those who are admitted, on the other hand, implies severe underestimations.

Pia Williams & Ingrid Pramling Samuelsson, 2000: Children's dissimilarities: a pedagogical challenge /Barns olikheter: En pedagogisk utmaning/ Pedagogisk Forskning i Sverige, Vol 5, No 4, pp 285–307. Stockholm. ISSN 1401-6788.

Today, within pedagogical contexts, communication is seen, both as a goal and a means for learning, that is, communication and collaboration have become central in the curriculum and the pedagogy. When teachers are aware of the importance of the language and the communication in the learning process, they also need to find very good or the best conditions for a communication, which allows all children in a group to talk and express themselves.

This article deals with a study, in which the effect of a teacher's efforts in attempts to make the quiet children in a pre-school group more verbally active. The children are divided into three different groups; (i) one group with boys, (ii) one group with those she consider to be the quiet girls, and (iii) one group with the more active girls. At three different occasions the children in the groups are given identically problems to solve. The teacher's assumption was, that if the children where put in groups together with equals, the terms would be more equal and by this the children should be encouraged to speak and take initiatives within the group.

Further, this would give the children stronger positions among their peers, which would enable them to show sides of their character, which otherwise would not have been brought into view. Each group at a time was given a task to solve, prepared by the teacher, at three different occasions during a two weeks period. Each occasion was video-recorded.

The purpose of the experiment was to study the effect of adapted influence on the ability to communicate and collaborate in these three pre-school groupings. The study describes an attempt, initiated by the teacher in order to try to solve a problem she believes exists in this pre-school group. The teacher organised the grouping. The experiment was not a study of the effect over time, it was limited to three occasions. Communication patterns and the development of communication patterns in child groups put together in accordance to the idea that children's similarities should promote communication was studied.

The data consists of video observations and written notes. The video observations have been transcribed, both as a description of what happened and in what way the children acted during their problem solving, as well as the dialogues between the children and the teachers (and other utterances). The analysis is qualitative, which in this case means that we have distinguished qualities and patterns in the communication and collaboration, as they are manifested during the studied problem solving situation. Both the children's and the adult's actions and verbal statements are used. The three problem solving situations in each of the three groups of children constitutes a totality and the basis for the analysis.

The context, that is, what the communication was about and the attitudes of children and the adults towards each other and towards the problem, became important in this situation. Learning became a matter of getting children to actively share different perspectives and experience situations in which new and different conceptual patterns gets a communicative value. The analysis focuses on how these perspectives and experiences manifested themselves.

The result shows that there is no verbal communication between the teacher and the children during the problemizing of the question about how to make an equal communication possible. The grouping of the children, which the teacher thought would make the quiet children more verbally active, did not lead to the desired goal. All groups solved the three problems presented, and they used different forms for collaboration and communication, both among themselves and with the teacher.

From this one can assume that the children would learn different things, not least about themselves as »learning individuals«. Among other things, the boys learnt to help themselves to the great scope which they gain in a group with solely boys. For the more active girls the possibilities to talk and express themselves increased somewhat together with equal peers in a smaller group. The way they behaved towards each other and the exercises was accepted by the teacher. She actually encouraged their behaviour towards each other. The quiet girls were offered a larger room in the small group, but they did not make use of it since their experience from the large group was to restrain themselves and wait. These girls did not get the help and support they needed in a situation like this, neither from the more advanced peers, nor from the teacher.

In the classroom existed unexpressed rules for how the communication between the children and between the children and the teacher should take place. The conversation climate, which was developed, led to a complicated attitude and it could be assumed that the quiet girls, way of communicating in the class was not accepted by the teacher, because they could not hold their own position against the other children. The other children's behaviour, the verbally active and dominating, was not accepted by the teacher either. Since these children's behaviour, to take or to gain a too large part of the room for conversation, made other children in the group lose room. The fact that some of the children did not take or gain enough room in order to express themselves was regarded as a problem by the teacher.

The patterns of collaboration the teacher had observed earlier, in the large group, became even more obvious when the children were divided into smaller groups. The talkative, active children got more room to talk and also got larger possibilities to challenge equals, while the quiet children got no help to develop new collaborative patterns. The teacher wanted to break off the pattern, which had developed in the group where those children who usually led discussions and answered questions spontaneously stuck together, while those who were not used to talk had to find their own, new ways when they were forced to act, since no one else was talking for them.

Here it could be presumed that the teacher acted on the assumption that action leads to a change. To change frames without changing the ideology and the attitude does not necessarily lead to a visible effect (Granström & Einarsson 1995). In the analysis of the communication and the interaction developed in the groups it becomes clear that the children act out from ingrained patterns. There is a risk that old positions become established and strengthened instead of opening up an awareness among the children about the prevailing communication in the group.

The basis, on which the teacher chose to divide the children into groups, caused the opposite effect from the desired – for one thing, because she was not aware of her own attitude towards the different groups. The teacher played a great part in the development of the communication and the co-operation pattern in the groups, but she adjusted herself to each group, which led to that the girls who often became quiet in large groups remained quiet even in this situation. For these girls the situation remained the same as when they were

together with the other children in the large group, since no change in the form for communication occurred.