Locus of Control, Perceptions and Attributions of Student Teachers in Educational Situations.

Student teachers' perceptions of locus of control was investigated. Locus of control is defined as representing the extent of dependence upon inner or outer forces, the extent one is willing to invest in shaping the environment, and the perception of reinforcement as dependent upon those efforts, or upon random events. The specific questions were: (1) Does locus of control explain the variance in student teachers' perceptions in simulated educational situations? and (2) Do student teachers attribute success or failure in actual teaching situations in view of their locus of control? Two hundred randomly selected student teachers participated. They responded to the Rotter IE Scale for the study of locus of control, and to two questionnaires, one of which investigated background variables. In the other, subjects were asked to react to eight simulated situations posing various educational problems, each followed by several possible solutions representing a characteristic perception and attribution of either external or internal orientation. Subjects were required to choose the one solution that represented how they would behave. The selected factors of locus of control considered relevant to teaching were: (1) inner vs. outer sources of authority; and (2) attribution of success or failure to inner or outer forces. The findings revealed that locus of control does influence student teachers' perceptions and attributions. These findings have implications for teacher education programs and individualized education methods. (JD)
Locus of Control, Perceptions and Attributions of Student Teachers in Educational Situations

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ABSTRACT

The frame of reference of the present study is individualisation of teacher education. In this context, it was the aim of the study to investigate whether locus of control is reflected in teacher behaviour in simulated educational situations and in attribution of success/failure following teaching experiences. Findings based on questionnaires and interviews with student-teachers indicate that Locus of Control explains the variance in perceptions and attributions.

Further questions and implications for teacher education are suggested.
Locus of Control, Perceptions and Attributions
of student-teachers in educational situations

The idea of individualization of instruction has in the last years deepened its roots to such an extent that it is no longer a point of contention. Instructional methods are developed and carried out with regard to individualization. Teacher educators stress and advocate this view and their student-teachers are expected to teach accordingly.

Paradoxically enough, this idea is well preached in teacher education institutions but is usually not operationally translated and put into practice in teacher training methods.

Various strategies of training do, however, consider individual differences, each in its own specific way. The CBE movement, for instance, allows for individual pacing and rate of learning, but the strategy itself remains the same for all. (Houston 1974). The same is true for the Teachers' Concerns approach, first suggested by Puller (1969) and further developed in the R & D center at the University of Texas at Austin. This approach advocates personalization of teacher education in view of specified developmental stages of students' concerns. It assumes, however, that each student goes through the same stages and in the same order. It is again one view and strategy for all, albeit at different rates of speed. Both examples involve different approaches, but once they are adopted they are employed in the same way for every student.

The main proposition of the present study is "teach what you preach", more specifically: if teacher educations expect their students
to adapt instruction to individual differences and apply a variety of methods; for this purpose, they should do the same for their students. Such a view would imply among other things, the consideration of student-teachers personality characteristics in the process of training, and adaptation of training accordingly, especially since no single method of teacher education can be superior for all. This proposition is in line with the Aptitude Treatment Interaction (ATI) suggested by Cronbach (1977), which implies that no single treatment is capable of meeting varying needs. Many aptitude treatment interactions have been investigated at the elementary school level but none has yet been studied, with student-regard to student-teachers. Should, for example, a highly dogmatic student-teacher be trained in the same way as his peer, who may be a highly creative, open-minded person? Will both types benefit most from the same program of teacher education? Or may it be that the employment of different programs will get better results. These questions may be answered in the future by the ATI technique if employed at the college level.

Such studies may be valuable only if it is indeed proved that personality characteristics do make a difference and explain variance in teaching behaviors. Thus, verifying the reflection of personality traits in teaching behaviors is a prerequisite step.

It is the aim of this study to investigate possible relationships and reflections of personal characteristics in perceptions and teaching behaviors of student-teachers. One such personality construct selected to start with is Locus of Control by Rether (1966). Locus of Control refers to the extent of dependence upon inner or outer forces, the extent of active efforts one is willing to invest in shaping his environment,
and to the perception of reinforcement as dependent upon those efforts, or upon random events. (Lefcourt 1976; Phares 1976). This personality construct has been quite widely studied at the pre-college level and it emerges as a central encompassing concept capable of throwing light on varying behaviors. Despite the face applicability of the concept and its relevancy in behaving of teachers it has not been studied at this level. In the attempt to ascertain whether ranging personality characteristics can account for varying behaviors in teaching, this construct has been selected as a central variable, because of its potential to relate to crucial issues in education, such as teachers' autonomy vs. dependence, personal responsibility, initiation and risk taking.

The specific questions addressed are:

- Does Locus of Control explain the variance in student-teachers' perceptions in simulated educational situations?
- Do student-teachers attribute success/failure in actual teaching situations in view of their Locus of Control?

Method

Population

Two hundred subjects were randomly selected from four types of teacher education programs. The reason for including diverse populations of student teachers was to study possible effects of environmental settings on perceptions and attributions as compared to the hypothesized personality effects.

The subdivision of student population is as follows:
high school teaching 1. field based oriented 77
training for:
2. academically oriented 25
elementary school teaching 3. field based oriented 40
4. academically oriented 58
Total 200

Research Instruments
1) The Rotter IB Scale (1966) for the study of Locus of Control.
2) Questionnaire including: Background variables age, ethnic origin type of pre-service program. The reason for this inclusion is in research findings which indicate a relationship between age, ethnic origin and L. of C.

Educational Simulated Situations (ESSQ) - This questionnaire was especially developed for the present study. It consists of eight short situations posing various educational problems, each followed by several possible solutions, each representing a characteristic perception and attribution of either external or internal orientation. Subjects were initially asked to indicate the extent to which they agree to each of the suggested solutions. They were then required to choose the one solution which best represented the manner in which they would behave in such situations if asked to act. The eight ESSQ items covered topics of locus of control and topics relevant to realities and routine in school settings. The selected factors of locus of control considered relevant to teaching were: 1) inner vs. outer sources of authority. 2) attribution of success or failure to inner or outer forces.
The selected topics were: discipline problems in the classroom and curricula planning and implementation. The following table illustrates the contents of the questionnaire:

<table>
<thead>
<tr>
<th>Authority</th>
<th>Attribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>2 items</td>
</tr>
<tr>
<td>Curriculum</td>
<td>2 items</td>
</tr>
</tbody>
</table>

The eight situations were selected from a larger pool that had been presented to two university professors, who served as judges and who were asked to judge the items at face value as to their relevancy to the factors and topics mentioned above. Only those items that were agreed upon by both judges as representing the view under question, were included.

The employment of both forced-choice and interval scales was decided upon for several reasons: to force subjects to choose one best view and thus avoid a possible tendency towards the center and at the same time leaving him the freedom to express his more exact view, which may be on neither extremes. Using both possibilities was an attempt to cope with the well known dilemma of dichotomy vs. dualism (Kerlinger 1958).

These two kinds of measures could also yield convergent validity (Campbell & Fiske 1967).

Scoring - each subject received 3 total scores on the ESSQ (educational simulated situations questionnaire): one forced-choice score ranging from 0-8 on E (externality) and two scores on I and on E, each ranging from 0-40 (8 items x 5 points).

These total scores were made up by sub-scores pertaining to "authority" and to "attribution".
3) Teaching Behaviors (Micro teaching situation) - 14 subjects, randomly selected from the whole study population were asked to teach two short lessons of 7-10 minutes each, to a small group of 5-7 pupils. The topic of one lesson pertained to a picture and the other to a short story, thus accommodating students that feel comfortable with one or other mode of stimulus material; visual or verbal.

Scoring - No a-priori (or a post eriori) criteria for analyzing the lessons with respect to locus of Control could be agreed upon, since observable teaching behaviors could not be distinctly associated with either internal or external orientations. (This point will be elaborated in the discussion). However, one score relating to the lessons was derived from a short interview, both following the teaching sessions, in which subjects were asked to suggest reasons for perceived success/failure. Two independent raters analyzed the protocoled interviews with regard to internal/external attribution, to success/failure. Inter-rater agreement was 90%.

FINDINGS

Findings in both table 1 indicate that the variance of the criterion - perceptions and attributions in educational situations - is significantly explained by the predictor - E score on the Botter scale. The other independent variables - type of program, age and ethnic origin - did not explain the variance to any significant extent.

Table 1 represents findings based on the internal scale scores. All forced-choice scores yield even stronger bet's, since both kind of scores yield similar results only those based on the internal scale are reported.
Perception of authority was also significantly predicted by Locus of Control, but not by the other considered variables. Since findings were of a negligible difference when received by the interval and the forced-choice scales, always in the favor of the latter, only those based the interval scale will be reported.

The variance of attributions of success and failure was also significantly explained by Locus of Control and not by the other hypothesized predictors.

Since the number of the observed student-teachers was too small to allow for regression analyses, coefficients of correlations were used to establish the extent of relationships between Locus of Control, perceptions and attributions in micro-teaching situations. Coefficients of correlations were .67 (P < .05) between Locus of Control and the score on interview and .50 (P < .0 ) between the ESEQ and the interview.

Findings indicate that the questions raised in this study can be answered affirmatively: Locus of Control is indeed influential on students-teachers' perceptions and attributions, as reflected both in questionnaire responses and in actual teaching situations.

Discussion

The proposition of the present study involves the individualization of teacher training processes in order to accommodate differing personality characteristics of trainees. This led to the need to investigate whether
personality characteristics are reflected in simulated educational situations.

Findings indicate that Locus of Control, the selected personality construct studied, was related to student-teachers' perceptions and attributions. Because of difficulties in isolating specific and observable teaching behaviors we did not concentrate upon actual teaching that may be direct and systematic indicators of Locus of Control. It seems that attributes of this construct may serve as motivators in pre-teaching processes and as interpretators in post-teaching processes; but do not lead to specific observable behaviors in the process of teaching itself. This notion deserves, of course, further study and investigations. Nevertheless, teacher educators should be aware of these pre and post teaching processes, since they may be detrimental in education. For example, attribution of failure to students, or to persons other than the teacher himself, may result in lack of efforts to improve teaching. The line of thought in this case may be as follows: "Why should I try harder, if results do not depend upon my efforts", or: "why should I devote time with my class since those children won't achieve anything no matter what I do".

What may be the implications for teacher education programs, is a crucial question that stems from the present findings!

Present educational goals point to the need of autonomous, innovative, creative teachers. These attributes accord with internal rather than external orientations. One implication then may concern student selection.
It could be argued on the one hand that high scorers on E-scale should not be accepted, on the other hand, this policy may result in loss of students who are very promising in other respects, and since there is no consensus regarding what constitutes good teaching, such an implication should be very carefully weighted. If high scorers on externality are, however, accepted, the question of change arises. Change, to the extent that it is at all possible poses a moral dilemma. Do teacher educators have the right to interfere with personality? Can such interference be morally justified? One could, of course, claim that the ultimate benefit of pupils in the source of such justification. If such an attitude dominates, then the question is how one can induce change.

From the existing repertoire of teacher training methods, discussions based of self-confrontation with one's own orientations might be helpful. The literature on self-confrontation is promising in this respect (Fuller & Manning 1973). Micro-teaching techniques intended to prove that intense efforts on the part of the teacher can influence pupil achievement, may also be helpful in changing orientation towards a more inward direction. This may be considered by some to be a crude intervention and a humanist may oppose such intervention. A solution of this dilemma will depend upon one's own views and turns the question of intervention in student-teachers' locus of control into an intriguing field of inquiry. Consideration of awareness of locus of control in teacher education institutions and further research into this area is an effort that may be in the future justified by its results.
References


### TABLE 1

Locus of Control and Simulated Educational Situations (SESQ)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>r</th>
<th>% explained variance</th>
<th>β</th>
<th>Criterion</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of Control (Z score)</td>
<td>.76</td>
<td>.38</td>
<td>.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training Program</td>
<td>.18</td>
<td>.01</td>
<td>.11</td>
<td>SESQ total score</td>
<td>65.31***</td>
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<tr>
<td>Age</td>
<td>-.15</td>
<td>.01</td>
<td>.04</td>
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<td></td>
</tr>
<tr>
<td>Origin</td>
<td>-.01</td>
<td>.01</td>
<td>-.03</td>
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</table>

d.f. 4; 182

*** p < .01
### Table 2

Locus of Control and Authority (SESQ partial score)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>r</th>
<th>% explained variance</th>
<th>$\beta$</th>
<th>Criterion</th>
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</thead>
<tbody>
<tr>
<td>Locus of Control (E-score)</td>
<td>.73</td>
<td>.53</td>
<td>.72</td>
<td>Authority (partial Score on SESQ)</td>
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<tr>
<td>Origin</td>
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<tr>
<td>Training Program</td>
<td>.14</td>
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<td>.03</td>
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<tr>
<td>Age</td>
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</tbody>
</table>

df. 4; 184

* * P < .01
### Table 3

Locus of Control and Attribution to Failure (SESQ partial score)

<table>
<thead>
<tr>
<th>Predictors</th>
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<th>P</th>
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<td>.37</td>
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<tr>
<td>Training Program</td>
<td>.09</td>
<td>.01</td>
<td>.04</td>
<td>Attribution of Failure</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(partial SESQ)</td>
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<tr>
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<td>.01</td>
<td>.04</td>
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<tr>
<td>Origin</td>
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d.f. 3, 187

* P < .01
<table>
<thead>
<tr>
<th>Predictors</th>
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<th>$r^2$ explained variance</th>
<th>$\beta$</th>
<th>Criterion</th>
<th>$F$</th>
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<tr>
<td>Locus of Control (R-Scores)</td>
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<td>Attribution to success (partial SESQ)</td>
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<td>.01</td>
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d.f. 4; 183

** p < .01