This research goes with a new tendency in the field of educational psychology—the study not only of students' motivation but also of teachers' motivation. However, the studies of teacher motivation had been only to acknowledge the factors to motivate teachers, without the analysis of motivation as a process that contains several cognitive variables. This research analyzed teacher's motivation to motivate students using the Ajzen's Theory of Planned Behavior (1985). This is one of the most thorough theories of human motivation because it integrates variables from several other contemporary theories. By this theory, behavior is predicted, taking into account the personal attitudes, intentions, perceived control, and subjective norm concerning this behavior. These variables are assessed by a 7-point likert type scale. Factorial analysis resulted in four factors, each one corresponding to the group of items that assess one of the variables. The results obtained with a sample of teachers and preservice teachers (n=143) showed that, in general, the relationships between these motivational variables are as expected by the theory, predicting behavioral expectations in what concerns personal implication in classroom tasks. (Contains 20 references.)
STUDY OF TEACHERS' MOTIVATION TO MOTIVATE STUDENTS BY THE THEORY OF PLANNED BEHAVIOR

Saul Neves de Jesus
Manuel Viegas Abreu
University of Coimbra (Portugal)

Paper presented at the
"23rd International Congress of Applied Psychology"
(Madrid, Spain, 17-22 July 1994)
ABSTRACT

This research goes with a new tendency in the field of Educational Psychology, that is the study, not only of students' motivation, but also of teachers' motivation. Nevertheless, the studies about teacher motivation had been only to knowledge the factors to motivate teachers, without the analysis of the motivation as a process that contain several cognitive variables.

In this research is analysed the teachers' motivation to motivate students by the Ajzen' Theory of Planned Behavior. This is one of the most thoroughly theories of human motivation because it integrates several variables that other contemporary theories focused. By this theory, the behavior is predicted taking into account the personal attitudes, intentions, perceived control, and subjective norm concerning this behavior. These variables are assessed by a 7-point likert type scale. By factorial analysis was obtained four factors, each one corresponding to the group of items that assess one of the variables. The results obtained with a sample of teachers and preservice teachers (n=143) showed that, in general, the relationships between this motivational variables are in the way expected by the theory, predicting behavioral expectations in what concerns to personal implication in the classroom tasks.

KEY-WORDS: Teacher Motivation; Student Motivation; Expectancy Theory.
This study problem and aim.

Students' motivation to learn is one of the main preoccupations of the politicians, teachers, and families. Educational Psychology have taking into account these preoccupations, and so the students' motivation is one of the main topics of the researches in this field of Psychology. Nevertheless, if we want motivated students at ours schools, we need motivated teachers (Czikszentmihalyi, 1982; Deci & Rayn, 1982; Jesus, 1993; Lens & Decruyenaere, 1991). Only if the teacher is involved in school activities he could motivate the students for these activities.

This study aim is to analyse the teacher' implication to motivate his students, by the Theory of Planned Behavior (Ajzen, 1985), which is an extension of the Theory of Reasoned Action (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1977; Ajzen & Fishbein, 1980).

The Theory of Planned Behavior.

This theoretical model demand that the intention to try performing a certain behavior (It) is the main determinant of this behavior (B). And this intention is in turn a function of attitude toward trying (At), that is the personal evaluation of this attempt, and subjective norm with regard to trying (SNt), that is the subjective perception of the social pressures to fulfil this behavior. The attitude is determined by salient beliefs (expectancy) regarding the consequences of behavioral attempt and by evaluations (valence) of these
consequences. The subjective norm is viewed as based on the person's beliefs about the judgments of important social referents, and on the person's motivation to agree with them.

The more favorable a person's attitude toward trying to perform a behavior, and the more he believes that important others think he should try, the stronger his intention to try this behavior. Nevertheless, the subject only will be successful in his attempt if has sufficient control (C) over internal and external factors, which, in addition to effort, also influence attainment of the behavioral goal.

Another important variable proposed by this theory is the behavioral expectation (BE), that is the person's estimate of the likelihood that he actually will perform a certain behavior. Generally speaking, people will expect to perform a behavior if they intend to try it (It) and if they believe that they can control it (bc). The higher is the correspondence between the person's belief in his control over the behavior (bc) and the degree of his actual control (C), the higher is the correlation between behavioral expectation (BE) and actual behavior (B).

The researches usually assess the correlations between the attitudes (At) and the subjective norms (SN) with the intentions (It), on the one hand, and between the intentions (It) and the beliefs in control (bc) with the behavior (B), on the other hand. The assessment is made by a series of 7-point scales of the semantical differential type. The results have showed significant correlations as foreseen by the Theory of Planned Behavior (Ajzen, 1985; Schifter & Ajzen, 1985).

**Hypotheses**

The major hypotheses of the present study can be stated as follows: first, it is expected that intentions (It) to motivate students can be predicted from attitudes (At) and subjective norm (SNt); second, intentions (It) and perceived
control (bc) should in turn permit prediction of behavioral expectation (BE) (see fig. 1).

Simultaneously, is analysed if there are some differences between teachers and preservice teachers in what concerns to the results obtained at the measured variables (see table 2).

**Sample and procedure**

A total of 143 subjects, 69 teachers and 74 preservice teachers, answered collectively to the questionnaires, on June of 1993. At the sub-sample of teachers, 51 are female and 18 are male, with ages between 22 and 53 years old (M=30.8) and time of professional practice between 1 and 23 years (M=5.9). At the sub-sample of preservice teachers, 57 are female and 17 are male, with ages between 21 and 33 years old (M=23.7).

**Questionnaires**

The questionnaire began with a series of background questions, including present age, sex and, for the teachers, the time of professional practice.

The next part consisted of twenty questions assessed on a 7-point semantic differential type scales. To assess the attitude toward motivate the students, respondents were asked to rate "for me motivated students to learn is..." on a five evaluative scales whose endpoints were labeled bad-good, harmful-beneficial, undesirable-desirable, weak-strong, and useless-useful. To obtain a measure of the subjective norm the respondents indicated whether five referents who were important to them (the students, the students families, the others teachers, his own families and friends, and the school directors) thought they should (or should not) motivate students to learn. Intentions to motivate students were assessed by asking the respondents to rate the degree of intention/ trying/ decision/ determination/ purpose to motivate students to
learn, from not at all to very much. The perceived control were also assessed by averaging responses about the degree of success/fulfil/control/reach/attain the students motivation to learn if trying to, from not at all to very much.

The measure of behavioral expectation is obtained by eleven classroom behaviors, for example, "eulogy the students when they are involved at the classroom tasks", "diversify the teaching strategics (group working, discussion, etc)", and "presents the practical usefulness of the programatic matters". To which behavior the respondents should point out the degree of the expectancy of fulfilling this, on a 7-point lykert type scale, from never (1) to always (7). The item-total correlations, without the weight of the item, had values between .421 and .622, and the internal consistency of this measure, as indexed by Cronbach's alpha, was .836.

Results and discussion

First, is analysed the factorial structure of the questionnaire used to assess the variables proposed by the Theory of Planned Behavior. By the factorization of the principal components, followed by orthogonal transformation, is obtained a simple structure of four factors, corresponding to the four variables in study, attitude (F1), intention (F2), perceived control (F3), and subjective norm (F4). The four factors explained 76% of the total variance. At the table 1 is point out the salient loadings of the items in the factors, that is, the loadings higher than .3 (Tinsley & Tinsley, 1987).

"Insert table 1 here"

Coefficients' alpha of .846, .867, .947 and .953 was obtained, respectively, for the measures of subjective norm, perceived control, intention and attitude.
These results support the adequation of the measures used to assess the variables in study. Furthermore, these measures are similar to these one's used at previous researches made by the Theory of Planned Behavior (Ajzen, 1985; Ajzen & Fishbein, 1980; Dzewaltowski, Noble & Shaw, 1990; Schifter & Ajzen, 1985).

Concerning to the causal relationships between the variables, in the way foreseen by the theory, the path diagram in the figure 1 represents the hypothesized causal model, presenting the path regression coefficients.

By the multiple regression are obtained a R-squared of .082 in the equation At & SNt --> It, and a R-squared of .114 in the equation It & bc --> BE.

"Insert figure 1 here"

The high residual coefficient (.81) shows that 65.6% of the total variance is not explained by the model. This means that in future researches some others cognitive-motivational variables should be integrated in the model.

By other way, these results shows that a linear combination of intention and perceived control permitted highly accurate prediction of behavioral expectation, and that subjective norm, but not attitude, made significant contribution to the prediction of intention. It seem that the intention to motivate students to learn is independent of personal attitude about this, but is dependent of social influences. These results do not concur with previous researches of the Theory of Planned Behavior, because at the greater part of them the contribution of attitude exceeded that of subjective norm (Ajzen, 1985). Nevertheless, the results obtained at our study are understandable if the subjects of our sample presents a lower professional intrinsic motivation (Deci & Ryan, 1991). If it happens, the subjects presents a lower professional self-
determination, and so the personal attitude decrease. For these kind of subjects is the social obligation that made they try to motivate the students to learn. It is important to study intrinsic motivation in future researches about teachers' motivation.

Nevertheless the path coefficient between attitude and intention is not statistically significant, being a negative coefficient could indicate a inverse relation between these variables (Vogt, 1993). This could means that it is not the attitude that predicts the intention, as proposed by the Theory of Planned Behavior, but is the intention that explain the attitude, as hypothesized by Nuttin's Relational Theory of Motivation (1980). This is another question to analyse in future researches.

Finnaly, is analysed if the professional practice have significant influences in the results obtained at the measured variables by one-way Anova's. The results show that the preservice teachers have a more positive attitude to try to motivate the students to learn and a higher belief that theirs referents think that they should try this than the teachers (see table 2).

"Insert table 2 here"

The results show a more positive personal attitude and a higher social pressure for the preservice teachers than for the teachers. These results could be explained by the irrealistic ideals and expectancies about teaching formed during teacher training (Bayer, 1984; Esteve, 1992; Veenman, 1984; Vila, 1988), dissonant with the students' indiscipline and disinterest at the classrooms (Abraham, 1988; Jesus, 1992).

**Future research directions**

Longitudinal studies with beegining teachers should be done. At the first moment, before the beegining of professional practice, are assessed the
variables attitude, subjective norm, intention, perceived control and behavioral expectation. At the second moment, after some time of professional practice, should also be assessed the real behavioral implication of teachers to motivate students to learn, during this initial period of professional experience. On the one hand, this kind of studies allow for the assessment of the influences of real experienced control of the professional situations, which could interfere towards the attempt to motivate students to learn, over the development of the variables proposed by the theory. On the other hand, it permits analyse the relationship between the behavioral expectation, assessed at the first moment, and the real behavior, assessed at the second moment.

Another proposed for future researches is the inclusion of some others cognitive-motivational variables, namely the intrinsic motivation to teach (Deci & Ryan, 1982), in the theoretical model of planned behavior, in a way of explain and predict a higher variance of the behavioral expectation, as a support for more general strategics to promote teachers' and future teachers' motivation.

REFERENCES


### Table 1.

Items loadings in each factor, communalities (hi2), and eigenvalues of the factorial solution, after orthogonal transformation, using the method default.

<table>
<thead>
<tr>
<th></th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>hi2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.897</td>
<td>.033</td>
<td>.044</td>
<td>.203</td>
<td>.850</td>
</tr>
<tr>
<td>2</td>
<td>.887</td>
<td>.041</td>
<td>.064</td>
<td>.164</td>
<td>.819</td>
</tr>
<tr>
<td>3</td>
<td>.874</td>
<td>.135</td>
<td>.013</td>
<td>.238</td>
<td>.839</td>
</tr>
<tr>
<td>4</td>
<td>.909</td>
<td>.097</td>
<td>.011</td>
<td>.159</td>
<td>.861</td>
</tr>
<tr>
<td>5</td>
<td>.938</td>
<td>.095</td>
<td>.019</td>
<td>.097</td>
<td>.899</td>
</tr>
<tr>
<td>6</td>
<td>.192</td>
<td>.212</td>
<td>.096</td>
<td>.561</td>
<td>.406</td>
</tr>
<tr>
<td>7</td>
<td>.133</td>
<td>.082</td>
<td>.020</td>
<td>.899</td>
<td>.832</td>
</tr>
<tr>
<td>8</td>
<td>.252</td>
<td>.158</td>
<td>-.190</td>
<td>.804</td>
<td>.771</td>
</tr>
<tr>
<td>9</td>
<td>.275</td>
<td>.149</td>
<td>-.067</td>
<td>.801</td>
<td>.745</td>
</tr>
<tr>
<td>10</td>
<td>.030</td>
<td>-.030</td>
<td>.070</td>
<td>.785</td>
<td>.623</td>
</tr>
<tr>
<td>11</td>
<td>.014</td>
<td>.854</td>
<td>.111</td>
<td>.131</td>
<td>.758</td>
</tr>
<tr>
<td>12</td>
<td>.108</td>
<td>.879</td>
<td>.121</td>
<td>.174</td>
<td>.830</td>
</tr>
<tr>
<td>13</td>
<td>.140</td>
<td>.894</td>
<td>.175</td>
<td>.048</td>
<td>.853</td>
</tr>
<tr>
<td>14</td>
<td>.070</td>
<td>.900</td>
<td>.150</td>
<td>.077</td>
<td>.842</td>
</tr>
<tr>
<td>15</td>
<td>.074</td>
<td>.897</td>
<td>.162</td>
<td>.121</td>
<td>.850</td>
</tr>
<tr>
<td>16</td>
<td>.124</td>
<td>-.007</td>
<td>.803</td>
<td>-.085</td>
<td>.667</td>
</tr>
<tr>
<td>17</td>
<td>-.012</td>
<td>.53</td>
<td>.879</td>
<td>.063</td>
<td>.800</td>
</tr>
<tr>
<td>18</td>
<td>.026</td>
<td>.098</td>
<td>.905</td>
<td>.027</td>
<td>.830</td>
</tr>
<tr>
<td>19</td>
<td>-.075</td>
<td>.194</td>
<td>.869</td>
<td>-.003</td>
<td>.799</td>
</tr>
<tr>
<td>20</td>
<td>.054</td>
<td>.247</td>
<td>.511</td>
<td>-.004</td>
<td>.325</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Eighenvalues</th>
<th>% Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.401</td>
<td>32%</td>
</tr>
<tr>
<td>2</td>
<td>4.115</td>
<td>20.6%</td>
</tr>
<tr>
<td>3</td>
<td>2.648</td>
<td>13.2%</td>
</tr>
<tr>
<td>4</td>
<td>2.035</td>
<td>10.2%</td>
</tr>
<tr>
<td>5</td>
<td>15.199</td>
<td>76%</td>
</tr>
</tbody>
</table>
Figure 1. - The path diagram with coefficients from the regression runs.

At \(-.115\)

SNt \(.22^*\)

It \(.24^{**}\)

bc \(.174^*\)

BE \(.81\)

*\(p<.05\); **\(p<.01\)

Table 2. - Mean values for the variables of the Theory of Planned Behavior, at each one of the two conditions of professional practice.

<table>
<thead>
<tr>
<th>Variable</th>
<th>yes</th>
<th>no</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>32.478</td>
<td>33.986</td>
<td>5.186</td>
<td>.0243</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>29.710</td>
<td>31.432</td>
<td>4.326</td>
<td>.0394</td>
</tr>
<tr>
<td>Intention</td>
<td>32.652</td>
<td>33.095</td>
<td>0.710</td>
<td>.4009</td>
</tr>
<tr>
<td>Perceived Control</td>
<td>26.232</td>
<td>27.500</td>
<td>3.519</td>
<td>.0627</td>
</tr>
<tr>
<td>Behavioral Expectation</td>
<td>63.232</td>
<td>62.541</td>
<td>0.283</td>
<td>.5956</td>
</tr>
</tbody>
</table>
I. DOCUMENT IDENTIFICATION:

Title: STUDY OF TEACHERS' MOTIVATION TO MOTIVATE STUDENTS BY THE THEORY OF PLANNED BEHAVIOR

Author(s): Saul Neves de Jefis; Manuel Vegas Abreu

Corporate Source: Publication Date: 1993

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, Resources in Education (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic/optical media, and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors. Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following two options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

[Signature]

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

The sample sticker shown below will be affixed to all Level 2 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

[Signature]

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at Level 1.

"I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Sign here→

[Signature]

Organization/Address: FACULTY OF PSYCHOLOGY AND EDUCATIONAL SCIENCES FROM COIMBRA UNIVERSITY; R. DOCTORAL (PORTUGAL) 3000 COIMBRA

PhD in Educational Psychology

Telephone: 039-4497450

E-Mail Address: Date: 30/9/96

(over)
III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:

Address:

Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:

Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse: THE ERIC CLEARINGHOUSE ON TEACHING AND TEACHER EDUCATION

ONE DUPONT CIRCLE, SUITE 610
WASHINGTON, DC 20036-1186
(202) 293-2450

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to:

ERIC Processing and Reference Facility
1100 West Street, 2d Floor
Laurel, Maryland 20707-3598

Telephone: 301-497-4080
Toll Free: 800-799-3742
FAX: 301-953-0263
e-mail: ericfac@inet.ed.gov
WWW: http://ericfac.piccard.csc.com