Teachers are being faced with increasingly complex ethical decisions. This study was conducted to identify and compare the levels of moral development and ethical decision-making processes of entry level teacher education students and exit level student teachers by examining their corresponding stages of moral development and the factors which impacted their decisions. Entry level teacher education students (N=373) and 158 student teachers responded to the Defining Issues Test (DIT) and 3 ethical decision vignettes designed to present ethical dilemmas commonly encountered by inservice teachers. Results indicated that both groups of students had lower than average levels of moral development and that student teachers reported lower levels of principled moral reasoning than entry level education students. Decisions made and the reasons influencing those decisions varied significantly across situations. This descriptive, exploratory analysis is a necessary initial phase in restructuring reflective, moral teacher education. A sample vignette and statistical tables displaying DIT results, vignette decisions and reason rankings, and significance of between group differences are provided. (Contains 22 references.) (LL)
TEACHER EDUCATION STUDENTS' MORAL DEVELOPMENT AND ETHICAL REASONING PROCESSES

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TEACHER EDUCATION STUDENTS’ MORAL DEVELOPMENT AND ETHICAL REASONING PROCESSES

Abstract

Teachers are being faced with increasingly complex ethical decisions. This study identifies and compares entry level teacher education students’ and student teachers’ levels of moral development and ethical reasoning in their decision making. Responses were collected from 373 entry level teacher education students and 158 student teachers to the Defining Issues Test and three ethical decision vignettes. Results indicate that both groups of students have lower than average levels of moral development and that student teachers reported lower levels of principled moral reasoning than entry level education students. Decisions made and the reasons influencing those decisions varied significantly across situations. This descriptive, exploratory analysis is a necessary initial phase in restructuring reflective, moral teacher education.
It is not enough to teach a man a specialty. Through it he may become a kind of useful machine, but not a harmoniously developed personality. It is essential that the student acquire an understanding of and a lively feel for values. He must acquire a vivid sense of the beautiful and of the morally good. Otherwise, he—with his specialized knowledge—more closely resembles a trained dog than a harmoniously developed person. He must learn to understand the motives of human beings, their illusions, and their sufferings in order to acquire a proper relationship to individual fellowmen and the community.

- Albert Einstein

Effective teachers need to possess more than a set of skills or the ability to transmit knowledge. Daily teachers make moral judgments and carry out decisions in their complex, multidimensional role. Furthermore, Beyer (1984) contended that becoming aware of the social, political, moral, and philosophical implications of teaching enhances the dignity and credibility of a teacher's status as a professional.

Theorists such as Dewey (1960), Piaget (1965), and Kohlberg (1971), considered the process of moral deliberation as one legitimate aim of schooling and by implication, of teacher education. In emphasizing the teacher's role as a moral agent, Goodlad (1988) claimed that the emerging professional teacher should be a "witting moral agent, with moral obligations derived from moral imperatives." (p. 109). However, with several decades of emphasis on students' academic performance and the technical skills of teachers, the meager literature available on the moral responsibilities of teaching attests to its neglect in teacher education. Noddings (1987) argues that only recently have the
goals of schooling, such as the teaching of academic skills, been detached from the development of character and explicitly moral aims.

As an increasingly technological society, we are apt to really believe that science will provide all the answers, that all we have to do to improve schools is just develop the technical skills of those we label teachers. We are apt to reject the importance of a moral ecology and the delicate balance of moral relationships between society, schooling, teaching, and preparing to teach.

(Sirotnik, 1990, p. 321)

Rogers and Webb (1991) warn that if teacher education ignores the development of educational and ethical decision making, it misses the heart of the work that teachers do. Moreover, Shulman (1986) argues that "norms, values, ideological or philosophical commitments of justice, fairness, equity, and the like...occupy the very heart of what we mean by teacher knowledge" (p. 11). A growing number of educational researchers have recommended that ethical concerns be central in considering approaches to teaching and schooling (Goodlad, Soder, & Sirotnik, 1990; Noddings, 1984; Tom, 1984). The power that teachers have to affect their students and others in the educational process is considerable. Thus it is crucial that teachers reflect ethically on their choices and make them in a morally responsible way.

Analyzing teachers' behavior without also examining their thinking processes such as moral deliberation and decision making would be incomplete. In research conducted to determine if teachers' levels of moral development were related to their thought processes and teaching behaviors, Johnston (1986) found a positive relationship between inservice teachers' understandings
of such teaching topics as individualized instruction and "on-task" behavior and levels of moral development measured by the Defining Issues Test (Rest, 1979). Johnston and Lubomudrov (1987) studied the relationship of teachers' levels of moral development as they related to the understanding of rules and teacher/student roles in their classrooms. Teachers with high moral development, as measured on the Defining Issues Test, had a more democratic view of teacher and student roles in the classroom. Furthermore, the researchers argued that from a cognitive developmental perspective, the understandings of teachers with higher DIT scores were more "professionally adequate" than those teachers with lower DIT scores because they had the capacity to think more complexly about educational issues. Lower levels of cognitive development apparently limited a teacher's ability to think about his/her role and behave in complex and reflective ways. Recommendations included the establishment of teacher education programs that encourage higher levels of moral cognitive development.

Strike (1990) has recommended that prospective teachers be instructed in those substantive ethical concepts (such as equity, tolerance, due process, and intellectual freedom) that are central to the activities of teaching. Noddings (1986) argues that it is important to create a caring community in our teacher education programs as those who will be expected to care about children must themselves experience a caring community through modeling, dialogue, practice, and confirmation. If the relative amount of ethical training content and experiences in teacher education curricula is to be increased, it appears logical to
first consider and extend research to include examination of the ethical decision-making processes of educators. Thus, the purpose of this descriptive, exploratory study was to identify and compare the moral decision-making processes of entry level teacher education students and exit level student teachers by examining their corresponding stages of moral development (Kohlberg, 1984) and the factors which impacted their decisions. Specific research questions include:

1) Do entry level teacher education students and student teachers possess differing levels of moral development?

2) Do entry level teacher education students and student teachers make different ethical decisions in similar situations?

3) Do different factors influence entry level teacher education students' and student teachers' ethical decisions?

Answers to these questions provide an objective first step in better determining how programs of teacher education can best provide curricula to ensure that prospective teachers will make ethical decisions that first and foremost consider the students' best interests.

Method

Subjects

A total of 531 responses to the research instrument, "Survey of Educator Ethics Opinions," provided empirical data to test the relationship between levels of education (before and after intervention of teacher education curricula), moral development,
and practical dilemma decisions. Two intact groups of teacher education students at a state university of 25,000 within a southwestern city of approximately 200,000 were recognized in different analyses of the data: 373 beginning teacher education students (entry level) and 158 student teachers (exit level).

**Procedure**

Entry level teacher education students completed the instrument during regularly scheduled foundations of education classes (generally taken the first semester of their junior year), while the student teachers completed the survey as part of their student teaching seminar nearing the end of their student teaching field experience at the end of their senior year. Most students completed the three section instrument within 30 to 45 minutes.

The response rate for both groups of students was virtually 100%. Internal validity checks for DIT scores (as outlined by Rest, 1986b and Table I) also reduced the numbers of valid moral measures from 158 to 151 for entry level teacher education students and from 373 to 356 for exit level student teachers. Due to incomplete or inconsistent data, 6 responses were also eliminated from the educational vignette analysis for student teachers.

**The Research Instrument**

Students completed the researcher-developed "Survey of Educator Ethics Opinions" instrument which consisted of three sections: (1) demographic questions, (2) three professional
ethical decision vignettes, and (3) the three story version of
the Defining Issues Test (Rest, 1986).

**Ethical Decision Vignettes**

In Section II three educationally related vignettes were
presented to investigate ethical decision-making by providing a
variety of specific educational dilemmas. These vignettes were
designed by the researchers based on personal experiences and
consultations with practitioners. These vignettes present
ethical dilemmas commonly encountered by inservice teachers in a
school setting and were field-tested by practicing teachers
revealing acceptable validity. The situations varied with
respect to commonality and direct applicability to educational
practice. Summaries of the three dilemmas follow:

#1 A teacher must decide whether or not to "blow
the whistle" on a fellow teacher who is exhibiting
questionable behavior.

#2 A teacher must decide whether or not to use PTA
funds for school or for personal expenses.

#3 A student teacher must decide whether or not to
comply with her cooperating teacher's instructions
to "teach the test." (Vignette #3 is presented in
Exhibit 1 as an example.)

Specific responses from each of the subjects to the three
vignette situations included: 1) what is the ethically right
decision (yes or no), and 2) a ranking of eight potential reasons
for the decision. Reasons which may have been important to the
decision-making process were included within each vignette for
subject consideration and ranking. It is not feasible to assume
that these reasons are 100% inclusive; however, these four
reason categories are perceived to directly affect decision
making. Exhibit 1 illustrates the reasons provided for vignette #3. The coded classifications in the left margin of Exhibit 1 have been added for this discussion and were not on the research instruments completed by the subjects. The design of the eight reasons resulted in two reasons supporting each of four potential influences on the final ethical decision:

Two rule-based reasons (RULE)
Two social relationship reasons (SOC)
Two student consideration reasons (STU)
Two personal interest reasons (PERS)

Rule-based reasons were designed to measure the importance of adhering to clearly stated rules, norms, or bureaucratic practices. Personal interest reasons consistently provided direct and immediate benefit to the decision maker. Social concerns were designed to consider the needs or wants of another stakeholder affected by the ethical decision. Student considerations reflected how students' interests would be helped or hindered by the teacher's decision.

There were an equal number of positive and negative reasons provided within each coding category, with four supporting a positive response and the other four supporting a negative response. A "yes" decision implied a code or rule-based decision for vignette #1 while a "no" decision indicated an implied rule-based decision response for vignettes #2 and #3.

Students were provided the opportunity to indicate reasons that they did not consider important and then were asked to rank the remaining reasons they considered relevant to their decision. A 16 point symmetrical weighting scheme (7,5,3,1) was applied to quantify the importance of the top four ranked reasons since a
The majority of respondents ranked four or more reasons on all vignettes. The quantification of reason importance also allowed comparison of subgroup measures.

**Defining Issues Test**

Section III included three vignettes taken from the Defining Issues Test (DIT) to determine stages of moral development. The three dilemmas presented are "Heinz and the Drug," "Escaped Prisoner," and "Newspaper" (dealing with a school newspaper).

The research method used to identify levels of moral development was based on Dewey's (1960) three levels of intellectual and moral development, Piaget's (1965) stages of cognitive development and Kohlberg's (1984) six stages of moral development. In addition to postulating his stage-sequence theory, Kohlberg and his colleagues at Harvard University developed the Moral Judgement Interview (MJI) as a means of identifying levels of moral development according to the six stages. James Rest (1979, 1986a) developed the Defining Issues Test (DIT) which is consistent with the stage-sequence theory and provides a less complex but still reliable assessment of moral development in terms of Kohlberg's stages. A summary of Kohlberg's stage theory follows:

I. Preconventional Level (focus on self)

Stage 1 - The physical consequences of actions determine their goodness or badness.

Stage 2 - Right action satisfies one's own needs, and occasionally the needs of others.

II. Conventional Level (focus on group)

Stage 3 - Good behavior is what pleases others and is approved by them.
Stage 4 - Right behavior consists of doing one's duty, respecting authority, and maintaining the social order, for its own sake.

III. Post-Conventional Level (focus on inner self)

Stage 5 - Right actions are defined in terms of general individual rights as well as standards agreed upon by society.
Stage 6 - Right is defined by the decision of conscience in accord with self-chosen ethical principles.

The "P" score from the DIT is the most commonly referred to measure of "the selective importance a subject gives to principled moral considerations in making a decision about moral dilemmas" (Rest, 1979, p. 5.2). It is a summation of stages 5 and 6. In total, the DIT provides quantitative measures for:

a) each individual stage (2, 3, 4, 5, and 6);

b) principled reasoning ("P" - a combination of stages 5 and 6);

c) two different types of internal validity checks.

The hundreds of studies which have been conducted allow objective comparisons with individual or other group DIT measures (Rest, 1979 and 1986a). For example, the DIT manual (1986b, p.iii) lists the following group P score averages:

65.2 Moral philosophy and political science doctoral students
59.8 Seminarians in a liberal Protestant seminary
52.2 Advanced law students
49.5 Practicing medical physicians
42.3 Average college students
40.0 Average of adults in general
31.8 Average senior high school students
21.9 Average junior high school students

The three sections of the research instrument provided analyses of the vignette decision responses, reasons for the decisions, and DIT scores. These findings indicated the impact of moral development on entry level teacher education students' and student teachers' ethical decision-making.
Results and Discussion

The data collected and analyzed in this study are summarized in Tables 1, 2, and 3. Table 1 compares the P scores and individual stage scores generated by the teacher education students and student teachers participating in this study between groups, with a prior study (1992) of educators, and with megastudy norms. Responses to the three vignettes for the yes/no decision ratios and the average reason rankings are summarized in Table 2. Table 3 reports the significance of between group differences for both the Defining Issues Test (DIT) and educational vignettes' decisions and reason categories.

The current study attempted to look more in depth at development in conventional (stage 3 and 4) thinking as well as the post-conventional (stages 5 and 6). Table 1 provides a comparison of the stage scores from entry level students and student teachers with those of a large standardized sample. It also displays the average group percentage reasoning attributed to each of Kohlberg's stages.

----------------------------------------------------------------------------

Insert Table 1 here

----------------------------------------------------------------------------

In general, the data from this study indicated that the P scores of entry level teacher education students (33.52) were significantly higher (p < .001) than those of student teachers (27.57). Significant differences were also reported between groups in stage five (p < .001). In addition, P scores and all stage scores for both groups differ significantly from
average college graduates (p < .001) with lower P scores, stage five and stage scores and higher stage three and stage four scores being reported for both groups of teacher education students. When compared to practicing teachers (from a prior study), entry level teacher education students reported significantly lower stage four (p < .01), and stage six scores (p < .001) as well as significantly higher stage 3 scores (p < .001). Student teachers also differed significantly from practicing teachers with lower P scores (p < .001), higher stage three scores (p < .001), lower stage four scores (p < .01), and lower stage six scores (p < .001).

On the average, the entry level teacher education students and student teachers displayed a predominantly conventional level of thinking significantly greater than the postconventional measures. Average college students and college graduates, to the contrary, displayed primarily postconventional reasoning. Entry level teacher education students and student teachers combined conventional level thinking (stages 3 and 4) accounted for over 50% of the thinking in making a decision.

A particularly interesting finding was the significantly lower reliance of student teachers on postconventional reasoning than entry level teacher education students. According to Rest (1986) growth in moral reasoning occurs during the college years. However, in the current study students demonstrated an even greater reliance on conventional thinking or a rule and order orientation following two years of teacher education curricula and field-based experiences.
The participating groups of students provided decision responses and a ranking of reasons associated with their decisions for each of the three vignettes. Results of the students' responses to these vignettes are presented in Table 2.

The quantification of reason importance in Table 2 permitted numerous observations and insights into the factors affecting the entry level teacher education students' and student teachers' ethical decision-making processes.

Perhaps the most basic observation is that all of the decision and reason categories were non-zero. Thus, each group of students thought each of the reasons had an important influence on their decision making in all three vignettes.

Another obvious observation is that the relative importance of reasons varied across the different vignettes. For example, both subgroups considered concerns for the student (STU) to be the most important in the situation involving blowing the whistle on a colleague (vignette #1). In vignette #2 (which dealt with PTA funds), the reason reported to be most important by both groups was the rule (RULE) or law and order orientation. The social relationship category (SOC) was of highest importance to both groups in vignette #3 when confronted with whether or not to "teach the test." While the student (STU) category was ranked highest averaged across all vignettes, student considerations were ranked lowest by entry level teacher education students and
next to lowest by student teachers in vignette #3 ("teaching the test"). Decision ratios for the first two vignettes were remarkably similar for both subgroups and followed the implied rule-based decision; however, for vignette #3, 49% of the student teachers indicated that they would "teach the test" as opposed to 28% of the teacher education students.

The statistical significance of between group differences is summarized in Table 3 which utilizes data from both the DIT and the educational vignettes. The first column in Table 3 is labeled P value and presents the results of the analysis of variance (ANOVA) between entry level teacher education students and student teachers. The DIT reported significant differences in the P score or principled reasoning score (p > .001) and stage 5 (p > .001). The P value is significant for the decision ratio in vignette #3 (p > .001), for the Personal reason category in vignette #1 (p > .01), the Social reason category for vignette #2 (p > .001), and the Student consideration category in vignette #3 (p > .01). In addition, personal reasons differed significantly at the .02 level in vignette #3.

**Conclusions and Implications**

The primary purpose of this study was to collect empirical data which identified and compared the moral decision-making processes of entry level teacher education students and student teachers as well as identified their corresponding stages of
moral development (Kohlberg, 1984). Based on the data collected from teacher education students in this study combined with the data from several other cognitive-developmental stage-based studies, it was concluded that there are significant differences in the ethical reasoning processes of educators.

The following conclusions are drawn from the results presented in the previous section:

1) Entry level teacher education students and student teachers in this study possess significantly different levels of moral development.

2) Entry level teacher education students and student teachers in this and other similar studies have principled reasoning scores (P scores) lower than average college graduates.

3) Entry level teacher education students and student teachers displayed a predominantly conventional level of thinking in this study with stages 3 and 4 accounting for over 50% of the thinking in making a decision.

4) Decisions on the vignette situations in this study varied significantly.

5) In vignette #3 student teachers varied significantly from entry level education students in their decision to comply and "teach the test."

6) The reasons ranked for importance on decisions varied between ethical decision situations.

6) Both groups of students ranked student concerns most important when averaged across all three vignettes.

7) Both groups of students ranked rule-based reasons second in importance when averaged across all three vignettes.

8) When confronted to "teach the test," student teachers ranked student concerns as least important, while entry level teacher education students ranked them next to lowest.

These conclusions provide meaningful and objective descriptions of both entry level teacher education students and student teachers, but only partially answer the research questions posed earlier. The results, however, indirectly
respond to the additional questions raised concerning the how and when of ethics training for teacher education students. From the study's results, it can be implied that teacher education students engage in a rule-oriented socialization process during their teacher education curricula and field experiences. Rather than experience growth in principled moral reasoning through the college years, after two years in the teacher education program, exit level student teachers demonstrated an even greater reliance on conventional thinking. Although this teacher education curricula has as its theme reflective thinking and analysis, the result from field based dominated experiences is apparently technical training which is oriented to rigorously defined entry level positions as a professional educator. Teachers recognized as achieving success in early years of employment are those that work hard to fit into the system, follow conventional rules, and provide superior technical service.

Possible explanations for the lower than average principled reasoning scores include:

a) educators' self selection to a rule orientation results in moral development that lags behind average college graduates and other professions.

b) Assuming that public schools reflect a bureaucratic model of organization, it follows that there are ample mechanisms within the bureaucracy for socializing individuals into acceptable modes of beliefs and behaviors that are more consonant with the goals of the organization than with the individual's personality.

If public schools are viewed as bureaucratic institutions with the tendency to systematically mold the behavior of personnel to make individual beliefs and values correspond with those of the organization, then the concept of bureaucratic socialization
offers some explanation for teachers' high degree of reliance on conventional, rule-oriented thinking.

The greater likelihood for student teachers to "teach the test" following experience and exposure to the reality of the pressures in the workplace was another significant finding. Due to the statewide mandated educational reforms and increased accountability measures for students and teachers, intense pressure to perform well and be a success has permeated virtually every classroom. The ethical implications of this scenario are far-reaching and monumental in the effects for all involved in the educational process. Educators must seriously weigh the costs of such practices.

Implications of this study include the consideration of educational strategies for the development of moral decision-making skills. Educators must ask themselves how an emphasis on rule orientation in decision making impacts the quality of education. Is it necessarily in the best interest of those served? The author thinks not. Teachers are being confronted with: 1) increasingly complex ethical decisions, 2) increasing concern about the quality of educational output (i.e., accountability, assessment), 3) being increasingly at-risk in terms of school violence and criticism by parents and the public, 4) increasing emphasis on cost effectiveness as school budgets are strained, and 5) addressing multicultural needs and values. Rule-oriented decision makers may not be contributing to the solutions of these many challenges but even be exacerbating them by perpetuating status-quo solutions, instead of making creative,
innovative decisions. With higher levels of principled reasoning, individuals may make better decisions in dilemma situations where there are no given rules or precedents and no clear-cut right or wrong answers.

Education students need to be cognizant of the "big picture"—that teaching is much more than simply the transmission of knowledge but a complex, multi-dimensional role in which they will be confronted with a multitude of moral dilemmas. Furthermore, teachers need to have an opportunity to reflect at length on their actions (Tom, 1984).

If we are to encourage the development of thoughtful decision makers, we must provide future teachers not only with a chance to make decisions during "real life teaching experiences," but—just as important—the opportunity to talk and reflect upon those decisions through genuine dialogue with peers and mentors. (Rogers & Webb, 1991, p. 179)

The use of cases/vignettes can facilitate discussion and reflection on the moral dilemmas of teaching. The incorporation of critical reflective analysis through the use of cases and/or vignettes is one way that programs of teacher education can be modified to achieve moral development of teachers by providing preservice teachers opportunities to examine the moral and ethical issues that teachers confront in their daily thinking and practice.

Change in principled moral reasoning and ethical decision making will realistically not be accomplished through incorporation of one new strategy, one single ethics course, or even a renewed emphasis on ethics in existing curricula. It is envisioned that it would require a monumental shift and restructuring of the whole educational community and
socialization process to effect such change. However, educators need to reflectively analyze all the factors involved, and ultimately make a decision.

This descriptive research study serves as a necessary initial phase in restructuring teacher education to include the teaching of ethics with opportunities for the development of moral decision-making processes. Further research is needed to determine the most effective educational interventions in experimental settings.
REFERENCES


Lisa is a student teacher in Mrs. Benson's third grade classroom for the spring semester. Although much of what Lisa is learning is proving very helpful for her future career as teacher, she is having difficulty complying with one of her cooperating teacher's recent requests. The problem involves the ITBS or Iowa Test of Basic Skills which is to be given in early March. Due to the tremendous pressure on teachers and schools regarding their students' test performance from both state and local sources, almost all instruction is focused on preparing for the ITBS for several weeks prior to its administration. Mrs. Benson has somehow secured an advance copy of the ITBS test and expects Lisa to "teach the test" in order to assure that her class will perform well. Lisa is wondering if refusal to comply with Mrs. Benson's directive will jeopardize her future job possibilities. She is well aware that her most important and influential reference will come from Mrs. Benson and wants to be assured of a favorable job recommendation.

If you were in Lisa's place, would you "teach the test" as Mrs. Benson has directed you?

YES

NO

The following items may have been important to you in making the above decision. You may have considered and offset both positive and negative aspects in the decision process. Please rank the items you consider most important by placing the number "1" next to the one you consider most important, the number "2" next to the item second most important, the number "3", "4" and on up as you continue this ranking for all the items you consider important. Place an "X" next to any item with which you disagree or do not feel relevant to the decision.

(RULE) "Teaching the test" is, in essence, cheating and breaking the rules.

(RULE) Lisa should obey those in authority over her.

(SOC) This is not an unusual situation; many teachers "teach the test" to one degree or another.

(PERS) Lisa's whole future may depend on Mrs. Benson's recommendation.

(STU) Intense preparation which focuses on drill and practice for several weeks before a test can cause students undue stress and result in a negative attitude towards learning.

(SOC) Considering such behavior (teaching the test) as acceptable does not uphold the high ideals of the education profession.

(PERS) Lisa must be true to herself and should not compromise her belief that "teaching the test" is inappropriate.

(STU) The students are in a sense being manipulated and used, and "teaching the test" is not in their own best interest.
### Table 1.
DIT Results for Teacher Education Students/Student Teachers

<table>
<thead>
<tr>
<th>P-Score</th>
<th>Conventional Level</th>
<th>Post Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stage 3</td>
<td>Stage 4</td>
</tr>
<tr>
<td>From this study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TCHR. EDUC. STUDENTS</td>
<td>33.52</td>
<td>17.72</td>
</tr>
<tr>
<td>(n=356)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STUDENT TEACHERS</td>
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<td>19.36</td>
</tr>
<tr>
<td>(n=151)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>From prior study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRACTICING TEACHERS</td>
<td>35.60</td>
<td>13.80</td>
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<tr>
<td>(n=112)</td>
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<td></td>
</tr>
<tr>
<td>EDUCATION STUDENTS</td>
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<td>16.00</td>
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<td>(n=90)</td>
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<td></td>
</tr>
<tr>
<td>Based on standardizing sample</td>
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</tr>
<tr>
<td>COLLEGE STUDENTS</td>
<td>43.20</td>
<td>14.30</td>
</tr>
<tr>
<td>COLLEGE GRADUATES</td>
<td>44.90</td>
<td>13.30</td>
</tr>
</tbody>
</table>

**Differences** (Significance)

| TCHR. EDUC. STUDENTS - STUDENT TEACHERS | 5.95  | -1.64 | -1.67 | 6.51  | -0.56 |
| (p value) | (.00)² | (.15) | (.25) | (.00) | (.28) |
| TCHR. EDUC. STUDENTS - PRAC. TCHRS (p value) | -2.08 | 3.92  | -4.19 | 3.40  | -5.38 |
| TCHR. EDUC. STUDENTS - COLLEGE GRADUATES (p value) | -11.38 | 4.42  | 3.41  | -4.60 | -6.68 |

| STUDENT TEACHERS - PRAC. TCHRS (p value) | -8.03 | 5.56  | -2.52 | -3.11 | -4.82 |
| STUDENT TEACHERS - COLLEGE GRADUATES (p value) | -17.33 | 6.06  | 5.08  | -11.11 | -6.12 |

¹A large sample of 1080 subjects (270 in each of four listed groups) have been used for standardizing computations [Rest, 1979]. The raw scores have been converted to percentages for comparison with current study DIT results.

²In this table, (.00) implies p < .001
### TABLE 2
VIGNETTE DECISIONS AND REASON RANKINGS

<table>
<thead>
<tr>
<th>Decision Ratio</th>
<th>Rule</th>
<th>Persnl</th>
<th>Social</th>
<th>Student</th>
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</thead>
<tbody>
<tr>
<td>TCHR. EDUC. STUDENTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vignette 1 .19</td>
<td>3.7</td>
<td>2.1</td>
<td>1.9</td>
<td>8.5</td>
</tr>
<tr>
<td>Vignette 2 .25</td>
<td>5.3</td>
<td>2.3</td>
<td>4.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Vignette 3 .28</td>
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<td>4.0</td>
<td>4.6</td>
<td>3.2</td>
</tr>
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<td>Average .240</td>
<td>4.4</td>
<td>2.8</td>
<td>2.7</td>
<td>5.3</td>
</tr>
<tr>
<td>p Statistic .0001</td>
<td>.001</td>
<td>.002</td>
<td>.000</td>
<td>.000</td>
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<tr>
<td>(n=373)</td>
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<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Decision Ratio</th>
<th>Rule</th>
<th>Persnl</th>
<th>Social</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>STUDENT TEACHERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vignette 1 .20</td>
<td>4.1</td>
<td>2.8</td>
<td>1.9</td>
<td>8.2</td>
</tr>
<tr>
<td>Vignette 2 .20</td>
<td>5.7</td>
<td>1.8</td>
<td>5.2</td>
<td>3.7</td>
</tr>
<tr>
<td>Vignette 3 .49</td>
<td>4.7</td>
<td>3.2</td>
<td>5.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Average .297</td>
<td>4.8</td>
<td>2.6</td>
<td>4.0</td>
<td>5.3</td>
</tr>
<tr>
<td>p Statistic .000</td>
<td>.003</td>
<td>.001</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>(n=152)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*In this table, .000 implies p < .0001*
### TABLE 3
**SIGNIFICANCE OF BETWEEN GROUP DIFFERENCES**

<table>
<thead>
<tr>
<th>COMPARISON</th>
<th>P VALUE</th>
<th>TCHR EDUC</th>
<th>STUDENT</th>
<th>DIFFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STUDENTS</td>
<td>TEACHERS</td>
<td></td>
</tr>
</tbody>
</table>

**DIT Results:**

<table>
<thead>
<tr>
<th>P Score</th>
<th>0.00</th>
<th>33.52</th>
<th>27.57</th>
<th>5.95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 2</td>
<td>0.31</td>
<td>6.64</td>
<td>6.12</td>
<td>0.52</td>
</tr>
<tr>
<td>Stage 3</td>
<td>0.15</td>
<td>17.72</td>
<td>19.36</td>
<td>-1.64</td>
</tr>
<tr>
<td>Stage 4</td>
<td>0.25</td>
<td>33.31</td>
<td>34.98</td>
<td>-1.67</td>
</tr>
<tr>
<td>Stage 5</td>
<td>0.00</td>
<td>29.30</td>
<td>22.79</td>
<td>6.51</td>
</tr>
<tr>
<td>Stage 6</td>
<td>0.28</td>
<td>4.22</td>
<td>4.78</td>
<td>-0.56</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vig. --1--</th>
<th>Rule</th>
<th>0.19</th>
<th>3.7</th>
<th>4.1</th>
<th>-0.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>0.01</td>
<td>2.1</td>
<td>2.8</td>
<td>-0.7</td>
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</tr>
<tr>
<td>Social</td>
<td>0.88</td>
<td>1.9</td>
<td>1.9</td>
<td>-0.0</td>
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</tr>
<tr>
<td>Student</td>
<td>0.36</td>
<td>8.5</td>
<td>8.2</td>
<td>0.3</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Decision Ratio</th>
<th>0.78</th>
<th>.19</th>
<th>.20</th>
<th>-0.01</th>
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</table>

<table>
<thead>
<tr>
<th>Vig. --2--</th>
<th>Rule</th>
<th>0.07</th>
<th>5.3</th>
<th>5.7</th>
<th>-0.4</th>
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</thead>
<tbody>
<tr>
<td>Personal</td>
<td>0.12</td>
<td>2.3</td>
<td>1.8</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>0.00</td>
<td>6.0</td>
<td>5.2</td>
<td>0.8</td>
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</tr>
<tr>
<td>Student</td>
<td>0.06</td>
<td>4.1</td>
<td>3.7</td>
<td>0.4</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Decision Ratio</th>
<th>0.20</th>
<th>.25</th>
<th>.20</th>
<th>.05</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Vig. --3--</th>
<th>Rule</th>
<th>0.19</th>
<th>4.3</th>
<th>4.7</th>
<th>-0.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>0.02</td>
<td>4.0</td>
<td>3.2</td>
<td>0.8</td>
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</tr>
<tr>
<td>Social</td>
<td>0.15</td>
<td>4.6</td>
<td>5.0</td>
<td>-0.4</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>0.01</td>
<td>3.2</td>
<td>3.9</td>
<td>-0.7</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Decision Ratio</th>
<th>0.00</th>
<th>.28</th>
<th>.49</th>
<th>-.21</th>
</tr>
</thead>
</table>

.00 Implies < .001