

American Educational Research Association Meeting,

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Classroom Reflections: Using Drawn Images of Critical Incidents for Social Construction
of Reflective Practice

Dorothy C. Armstrong and Sally Hipp

Abstract

This research documented an innovative technique called Classroom Reflections (CR) that could successfully develop teacher candidates (TCs) abilities as reflective practitioners. Elementary and secondary TCs used their drawing of a critical incident first to analyze their own practice and then with others to construct deeper meaning. TCs were in a yearlong preparation program for returning adults in which they did courses and field concurrently. Data for two years will be reported. Raters determined that about 80% of the TCs' analyses demonstrated reflection and application theory to their practice. The TCs reported that CR was a good way for them to examine their practice, gain multiple perspectives, and collaborate with others.

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Objectives and Purposes

Teachers and K-12 students alike need to be skilled critical thinkers, problem-solvers, and individually responsive to be effective in the public arena. For K-12 students, schools are typically their first public arena. This offers teachers a living laboratory in which to develop the commitment, knowledge, and skills to prepare today's students for tomorrow's world. The key to doing this is to prepare reflective teachers who can apply theory to their practice and think critically and creatively about solutions to problems that arise. While there is a great deal written about the goal of preparing reflective teachers, there is little in the literature on research-based techniques for doing this. This research examined whether teacher candidates' (TCs) drawing and written analysis along with later small group discussions of critical incidents that occurred in their own fieldwork answer the following qualitative research questions:

- 1) Does this technique promote the development of reflection in ways that researchers could document?
- 2) Does this technique provide evidence that TCs applied theory to their practice?

The findings from two years of the same research design will be reported. The subjects were graduate-level student pre-teachers who were participants in a yearlong

intensive initial certification program. The program is a cohort model for returning adults that links theory and practice throughout the program with a yearlong internship within a single school completed concurrently with coursework. The TCs attended weekly seminars that typically combined elementary and secondary TCs. Throughout the program, the TCs did a variety of assignments calling for reflection including analyzing case studies of critical incidents, depicting their actual and ideal learning situations, and writing reflective journals.

Theoretical Framework

This study is based on a constructivist philosophy and reflects humanistic researchers' beliefs that it is only the individual who can and should provide insight into his or her thoughts and actions (Maddi & Costa, 1972). Fosnot (1996) described constructivism as a set of techniques that expects learners to raise questions, analyze, and organize their experiences. For this type of reflection on teacher practice, Smyth (1989) suggests that teachers use a reflective sequence that includes: describing, informing their practice, confronting, and finally reconstructing. Here we frame this sequence through the use of critical incidents (Flanagan, 1954) that Hole and McEntree (1999) extended from psychology into teacher education.

The current research extends the lead researcher's work in the use of the cognitive implications of art. Previously she developed ways to use children's' drawings of their actual and ideal school preferences to determine their school preferences (1995) and learning style preferences (2004). This line of inquiry is based on the work of Piaget and Inhelder (1971) who stated that drawing consists of externalizing previously internalized mental images. Goodenough (1962) reported that drawings reflected more than visual

imagery; they also reflected cognitive development and have intellectual meaning. More recently, the kinetic approach to both family and school drawing has generated much interest among clinicians (Habenicht, Shaw, & Brandley, 1990; Knoff, 1983; Knoff & Prout, 1991). While earlier studies of drawings focused on trying to infer deficits or emotional concerns, Golumb (1992) finds that drawings represent a completely unique human activity, which has its own symbolic domain like math, or language, which must be studied systematically.

Connection to the Literature

This research uses a method we named Classroom Reflections (CR) to teach reflective practice to teacher candidates. The TCs were asked to draw a critical incident, describe what happened, suggest some reasons for why it happened, and connect the incident to a theory or theorist. It is in discussion with others that the more in depth questions are answered as to meaning and implications for practice. Tripp (1993) suggested this sequence and used the term "guided reflection" to describe this style of teaching. Schon (1987) found the difference between reflective and non-reflective teachers was that non-reflective teachers relied on routine, tradition, and authority while reflective teachers have the ability to critically and intelligently examine personal premises and their schools' assumptions about educational practice. Reflective teachers are more aware of the impact they have on their students (Handel & Lavas, 1987; Posner, 1993; Schon, 1991). They become more aware of how students view them and the expectations students have about teachers (McCombs, 1997). When TCs analyze a critical incident and discuss their response to it with a colleague, the incident becomes a

catalyst for change. It is only in reflection that we become conscious of how it transforms the human experience (Swain, 1998).

In drawing the incident as well as writing and discussing it, the drawings become a springboard for reflection by self and others (Weber & Mitchell, 1995). Weber and Mitchell (1995) remind us that “what we have forgotten which we might censor from our speech and writing, often escapes into our drawings” (p. 304). When teachers can see and talk about their behaviors, they can gain new perspectives and provide new solutions for themselves and others.

Articulated Mode of Inquiry

Methodology

Subjects

Year 1: N=79 (40 elementary TCs 29 female, 11 male and 39 secondary TCs; 18 female and 21 male)

Year 2: N=64 (33 elementary TCs; 23 female, 10 male and 31 secondary TCs; 18 female, 13 male)

Procedure

At the beginning of their student-teaching semester, the TCs were introduced to CR. Twice during the semester they were asked to bring to seminar a depiction and written analysis of a critical incident that had happened to them in the classroom. The directions on the form were:

Consider all of your teaching experiences. Select one that has particular importance to you. It may be one that was a difficult situation, a challenge, or some experience that you would like to reflect on to more fully understand its

implications for your practice. Now draw a representation of it. Be sure to label all participants.

Then on the adjacent sheet, the TCs were asked to briefly describe the image, consider why it might have happened and finally to ponder its implications for their practice. (See Figures 1 and 2 for the complete CR form.) They were asked to link their analysis with the theory that they had been learning in their coursework. Finally the TCs were told that they could use symbols or stick figures to represent their image if they were concerned about their drawing skills.

When the TCs came to seminar, they met in small groups in which each person briefly presented his or her incident and then the group selected one to analyze in greater depth. In the discussion groups, the TCs were to first ask clarifying questions, then discuss why the incident might have happened, consider alternative ways to respond, and lastly to link the experience to one or more educational or behavioral theorists. Finally the TCs reported and discussed major themes with the whole group. At the conclusion of the second CR experience, the TCs completed an evaluative written survey of CR. Both years, the CR pictures were due after four and eight weeks into the student teaching experience.

Selection and Use of Evidence to Support Conclusions

The findings reported in this study were gathered using both quantitative and qualitative methodology (Johnson & Onwuegbuzie, 2004). Year 2, the TCs completed a short form that they turned in with their pictures on which they reported how often this type of incident occurred, what type of incident it was (e.g., instructional concern, emotional and or behavioral), and finally if they responded with one or more actions.

This provided information on the nature of incident the TC perceived as a critical incident. This data was collected for Year 2 of the study only.

To assess the level of reflection and the use of theory, the researchers who served as expert raters created a continuum of criteria to analyze the level of reflection and the amount of theory that the written narratives revealed. The raters then evaluated the pictures in a blind review for the level and extent of reflection and theory that emerged in each picture. The categories for reflection along a continuum were: no written evidence, general response, specific recommendations, reaction and theory linked, reaction and theorist linked and evaluated impact. We defined reflection as beginning with the specific recommendations category. The continuum for use of theory was: no person or theory mentioned, mentioned one theory, mentioned one theorist, mentioned theory and theorist, mentioned more than one theory, mentioned more than one theorist. Finally, TCs completed a questionnaire about their perceptions of the value of this technique.

The frequencies of response were compared using the Mann Whitney non-parametric statistic test. The Wilcoxon signed rank test was used to compare the level of theory and reflection between each TCs' first and second pictures. While the data was analyzed by gender as well as level (elementary or secondary), few significant differences emerged from either year of the study. Thus the frequencies for the aggregated sample will be reported.

Results

The results of the study were positive both years of the study. The TCs agreed that CR allowed them to ask and respond to other's questions (Year 1: 82%; Year 2: 78%

agreed), gain additional perspectives (Year 1: 68%; Year 2: 60%), and to give and get support and encouragement from peers (Year 1: 78%; Year 2: 71%)

Insert Table 1 Here

Research Question One. TCS used reflection in their CR in ways that the researchers could document. The percentage of TCS using reflection was over 80% all pictures both years of the study. There was no significant change in the use of reflection between picture 1 and picture 2 either year of the study.

Insert Table 2 Here

Research Question Two. TCS applied theory in their CR in ways that the researchers could document. The percentage of students who used theory in their analysis of their CR ranged from 77% to 89% in the two years of the study. There was a significant change in the level of theory between picture 1 and picture 2 ($p \leq .01$) in year 1 of the study.

Insert Table 3 Here

Content themes

The summary of the self-report data about the content of the incidents showed that about 2/3 of the TCS depicted incidents about managing classroom behavior of either

an individual or a group. The remaining incidents were either about instructional practice or emotional/affective issues. The percentage incidents involving a single student or a group remained consistent between both pictures. For example, in Figure 1, the teacher candidate (TC) is frustrated with her inability to control a group of students as they made a transition from one activity to another. Her analysis revealed her confidence that once she developed a plan that she would be able to manage the transitions successfully. In Figure 2, however, the TC believed that he has applied the best of what he has learned only to have initial success devolve to failure. Perhaps the promising aspect of his CR was his conclusion in which he maintained his belief that it is the teacher's responsibility to continue to seek out ways to positively affect the learning of even the most difficult of students. This optimism that they can effect change was typical of virtually all the responses.

The images of the incidents revealed nuances in the ways these concerns manifest themselves as the following examples show:

A male middle school TC felt his authority challenged by one student:

A student was continuously making inappropriate noises in class. I asked him several times to stop (after first trying the principle of extinction). When I discussed the issue privately with him, he said, "You can't get me in trouble, you are not the teacher. Mrs. _____ is. Perhaps in the past I have not been as consistent with applying disciplinary measures for inappropriate behavior.

A male high school TC revealed insecurities about his instructional practice:

This image shows me teaching a class without moving around all day! (Early in my student teaching). I was nervous! I was afraid I would look dumb if I moved

around. I think the students lost interest- a moving target holds their attention better.

A female elementary TC reflects on the implications of differences between her herself and the classroom teacher:

I did not use the teacher's style of classroom management. I did not use a low soothing voice. I did not know how to help the students manage themselves.

A male elementary TC pondered this challenge:

One of my [African American] students had gotten in trouble. As a last resort I had to send her to the office so I could finish the lesson. After taking my students to a special I went to talk [with the student] about what happened. She had a disagreement with another student but in the end I took the word of a 3rd grade student [who] was not involved but had heard what was said. The 3rd grade student was an unbiased party. From the student's perspective she got in trouble while the white student did not.

Finally, a female elementary TC is beginning to reflect on her own future classroom:

This is a picture of my class and me. I am turning off the lights and they are putting their heads down.... Although this has proven to be an effective behavior management strategy for getting students to sit quietly, it has also raised some questions about the type of classroom I visualize in my future. I don't think I believe that the best learning takes place when student are sitting quietly completing worksheets.

It is not surprising that issues of power are of paramount concern. However, the TCs did not see themselves as powerless to influence the situations. Although the

assignment did not require going beyond theory to taking an action, over 80% reported taking at least one action. The varied depictions of similar incidents allowed the TCs to understand that others shared the same concerns. Further, after the discussions, they could envision different responses that could potentially prepare them to deal more effectively with similar upcoming situations. In addition, the pictures allowed field supervisors to gauge the valence of the problem (e.g., one TC drew herself prone on the floor with her students running wildly around her with bows and arrows). Seeing this graphic let the field supervisor know just how overwhelmed this TC was feeling.

Discussion

Contribution to the Field: Educational Significance

This research supported the use of reflective practice in teacher preparation programs. We found that the pictures enhanced collaborative discussions in ways that words alone did not. Posner (1993) posited seven stages of reflective practice. The beginning stages describe knowledge unexamined in light of the person's beliefs, values and interpretations. Our design expected TCs to work at the upper levels of this stage theory. In CR, TCs works at the contextual stage (stage 5) when they select a critical incident from their classroom experiences and then apply knowledge across contexts when they analyzed these with their peers in the small group discussions (stage 6). Ultimately the goal must be the seventh stage, which is reflective knowledge. At this stage a teacher uses a synthesis of evidence and opinion to guide practice.

Providing experiences that encourage reflection is an important part of the education of the TCs. Doyle (1986) described a type of “functional blindness” that occurs when students are not taught to reflect. Experience alone may not always result in

learning. Learning cannot be equated with experience. “Reflection –ness seems to be a key in terms of how people learn from experience – or fail to learn from it” (Oxford, 1997, p. 47).

An important part of CR is giving TCs an opportunity to share their assignment with a group of their peers for discussion. This type of knowing is in itself significant because the participants in the CR experience are contributing meaning to the drawings and the descriptions. This is an example of social constructivism because the TCs provide the context of the drawing and help to give meaning to their own CR and those of their peers. “Disciplined, reflective inquiry promoted by the community of learners tries to make the stability of meaning prevail over the instability of events (Dewey, 1925/1981, p. 49).

CR reveal strategies the TCs use in their student teacher placements. Lacey (1987) believed that student teachers use three strategies to cope with experiences they encounter in their placements. The student (a) abandons university teaching and complies with the constraints of the school, (b) complies with the school yet has reservations, and (c) faces the constraints in the school and uses the university teachings to bring a whole new solution to the problem. These three strategies were evidenced in the CR. TCs struggle with what they observe in their placement and what they have learned as part of their coursework. Their drawings and descriptions revealed this struggle and the social context in which the CR is shared give the TCs an opportunity to work through these struggles.

CR provides teacher educators with important information regarding the development of the TCs in their progression toward becoming teachers. The researchers

found that CR touched on issues regarding diversity, teacher authority in the classroom, student involvement in decision-making, classroom management, and the tensions that exist between the TC and the mentor teacher. These insights informed our practice.

Conclusion

In order to prepare professionals to make quality decisions, we must prepare them to reflect deeply and to construct meaning from their experiences (Lambert, Walker, Zimmerman, Cooper, Lambert, Gardner, & Slack, 1995). Cuban (1993) claimed teaching is the same now as it was a century ago. Today's students and tomorrow's society are not. If we expect teachers to be able to prepare their students to be committed to the public good, they must themselves have the same skills as those they expect to nurture in their students. They must recognize problems, critically analyze them, and be willing to try solutions that can make a difference.

Reflective practice cannot be assumed in teacher education programs. It must be taught. The knowledge gained from the university and the knowledge gained from the field cannot be divorced from each other (Rovegno, 1992a). The assumption that providing our students with both contexts will ensure that they will construct meaning that combines the two is not supported by the research (Desforges, 1995, Rovegno, 1992b, Engestrom et al.,1995). CR provides the teacher educator with a format for teaching reflective practice which enables TCs to make the connection between the university and the field.

To develop the most effective reflective teachers additional research should be done to explore the use of this technique with in-service as well as pre-service teachers.

Classroom Reflections gives participants a vehicle around which they can converse and opens up through drawings issues the participants may not even be aware of themselves.

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Table 1
Level of Reflection Year 1 and Year 2

	Year 1 (N = 79)		Year 2 (N = 64)	
	Picture 1	Picture 2	Picture 1	Picture 2
No written evidence	9%	5%	6%	3%
General response	9	8	12	15
Specific recommendations	34	12	14	12
Reaction and theory linked	28	47	48	47
Reaction and theorist linked	8	2	6	9
Evaluated impact	13	27	14	14

Table 2
Use of Theory Year 1 and Year 2

	Year 1 (N = 79)		Year 2 (N = 64)	
	Picture 1	Picture 2	Picture 1	Picture 2
No person or theory mentioned	23%	11%	14%	22%
Mentioned one theory	52	57	50	42
Mentioned one theorist	2	2	2	2
Mentioned theory and theorist	8	7	3	6
Mentioned more than one theory	14	24	32	26
Mentioned more than one theorist	3	2	0	3

Table 3
Year 2: Teacher Candidates' Self-Report on Theme, Frequency, and Action of the Incident Depicted

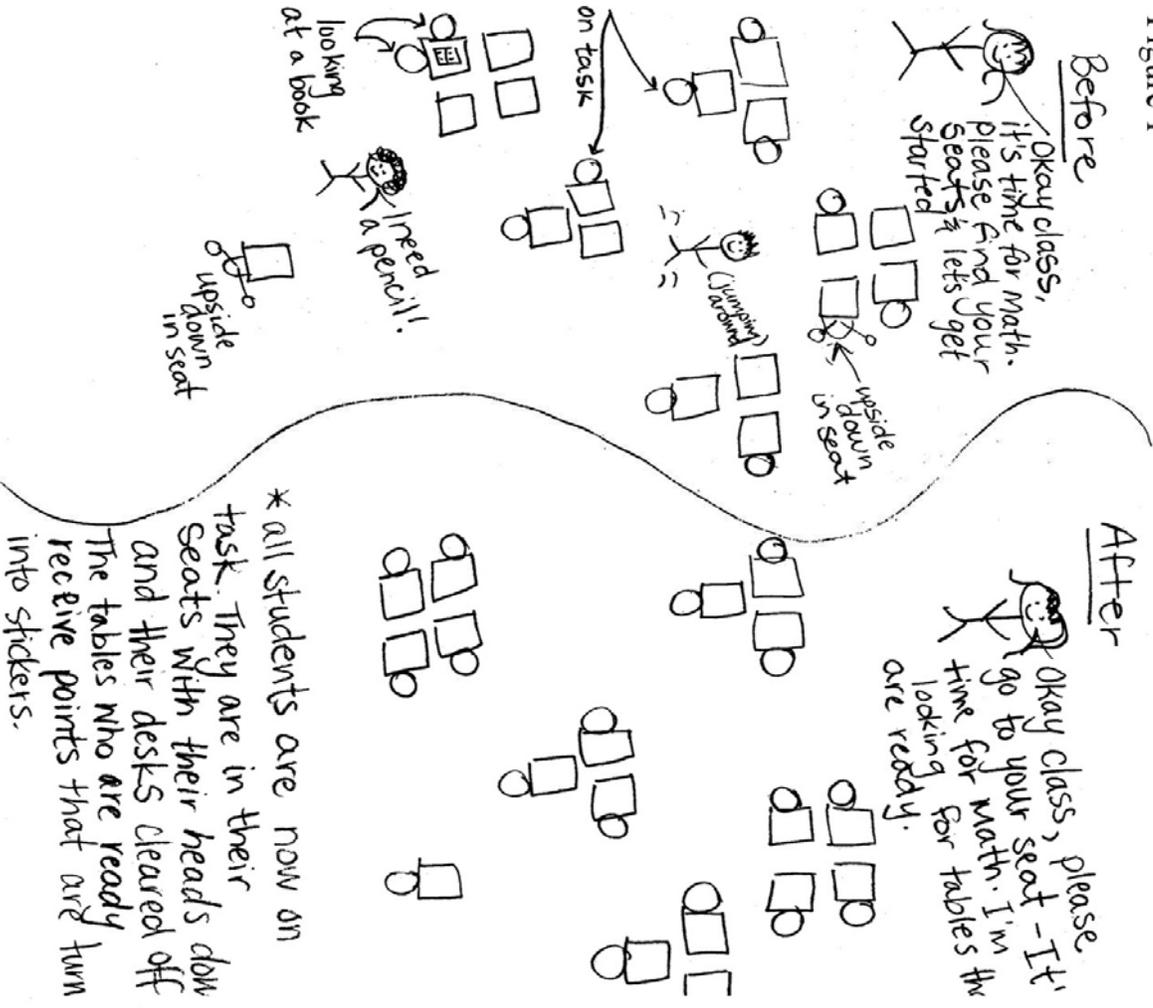
	Picture 1 (N=64)	Picture 2 (N=62)
Major Theme		
A single student's...		
Classroom behavior	45%	48%
Emotional/Affective issues	12	8
Reaction to the teacher's instructional practice (self)	14	5
Reaction to the teacher's instructional practice (not self)	2	2
More than one student's ...		
Classroom behavior	17	23
Emotional/Affective issues	3	3
Reaction to the teacher's instructional practice (self)	8	12
Reaction to the teacher's instructional practice (not self)		
Frequency		
Ongoing concern	51	43
More than one time	20	29
One time incident	28	26
Hypothetical concern	2	2

Table 3 (continued)

Action		
No action identified	8	3
Action identified but not taken	5	5
More than one action identified	8	14
One action taken	17	19
More than one action taken	52	46
At least one action taken but more are identified	11	14

Note. Respondents could select more than one response within the categories.

Figure 1



1. Briefly describe the image:

Before: Transitions were a nightmare! It used to take at least 5 mins. to go from one activity to the next. People would be jumping around, talking with someone away from their desks.

After: Once the team points came into play - they held each other accountable for their actions and transitions only take a minute or two.

2. Why it might have happened? Consider implications for the target students, other students, the teacher, the school system.

See above - After,
 There is more responsibility placed on the groups as a whole to get ready for the next activity.
 Teacher preparation helps too!

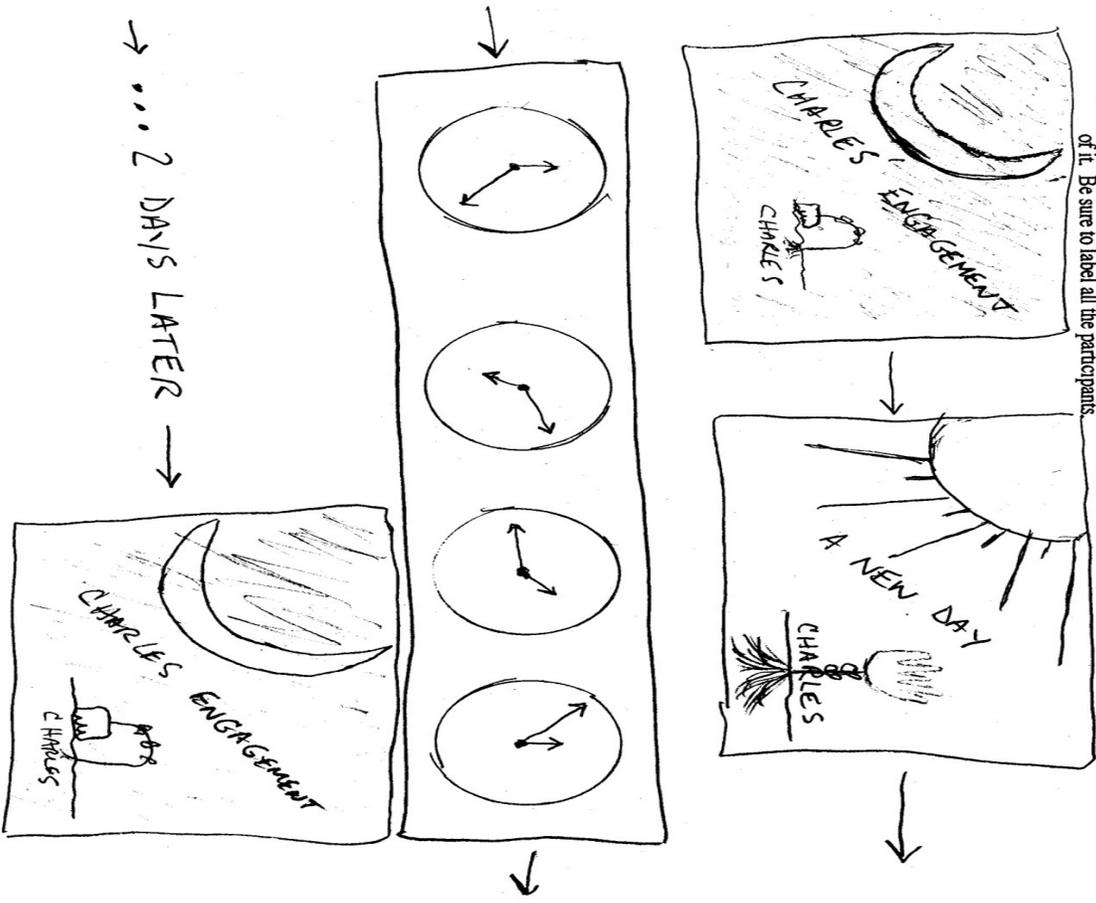
3. What are the implications for practice? Link the theory you have been studying or what you already know to the practice depicted. How might the ideas behind this image be used to promote the talent development of students?

As a teacher, you must have a structure in place that students understand and can hold each other responsible for.
Teachers also have to be thinking ahead and be prepared to move right into the next thing without making the students wait.

(Attach additional sheets of narrative as necessary.
 Put the number of question being extended with each extension)

Figure 2

Consider all the observations you have been making. Select an important one (it might be a challenge, a success, a situation you did not fully understand). Now draw a representation of it. Be sure to label all the participants.



1. Briefly describe the image:

CHARLES MY REPRESENTATION FOR HIS BEEN A CASE STUDY, HE IS THE EPILOGY OF THE CHALLENGED ART STUDENT... PHYS AND ATTENTION, SUMMER'S NOTHING, AND REALLY LOUD ONE LESS. HE WINS GIVEN A NEW LEASE ON LIFE AND ACCEPTED IT WITH OPEN ARMS. SHORTLY, IT TOOK HIM ONLY A COUPLE DAYS TO LOSE HIS ENTHUSIASM FOR SUCCESS, AS HE QUICKLY REVERTED TO HIS TYPICAL STATE OF DISENGAGEMENT. HIS "CLEAN SLATE" QUICKLY BECAME CLOUDS WITH ALL NEW LEADS ON HIS PROGRESS REPORT.

2. Why it might have happened? Consider implications for the target students, other students, the teacher, the school system.

THIS ISSUE GOES RIGHT TO THE CORE OF THE QUESTION "WHY MOTIVATES PEOPLE?" THEY CAN POINT OUT ALL THEY WANT, BUT NEITHER ALIE KOHN NOR JIM FAY NOR SIGMUND FREUD REALLY HAVE A CLUE AS TO HOW TO ANSWER THIS QUESTION. CHARLES HAS BEEN BOTH DABBLER AND GIVEN OPPORTUNITIES FOR SUCCESS ON MULTITUDS OF LEVELS, YET HE CHOOSES NOT TO ENGAGE ANY OF THEM. THE IMPLICATIONS ARE SIMPLE... YOU SIMPLY CONTINUE TRYING UNTIL YOU ACHIEVE SUCCESS WITH STUDENT OR UNFORVUNNELY, LET GO WITH THE KNOWLEDGE THAT ALL DIABLOUS CAN'T BE RECOVERED. 3. What are the implications for practice? Link the theory you have been studying from the or what you already know to the practice depicted. How might the ideas behind this image be used to promote the talent development of students? IS THE IMPLICATIONS FOR PRACTICE IS THAT IT IMPERATIVE FOR TEACHERS TO CONTINUOUSLY SEEK NEW MEANS TO RECOVER THESE KIDS. TIME IS LIMITED, OBVIOUSLY, BUT IN THE TIME ALLOTED ONE MUST CONTINUOUSLY SEARCH FOR EFFICIENT SOLUTIONS. NEVER GIVE UP ON A KID UNTIL THE CONSTRAINTS OF TIME REQUIRE SUCH.

(Attach additional sheets of narrative as necessary. Put the number of question being extended with each extension.)