The Practitioner Center: Innovation in Teacher Training from Practitioner to Practitioner.

The Practitioner Center, an innovation which provides a vehicle for a transactional approach to teacher growth and professional development, incorporates the concept of peer leadership with "teachers teaching teachers" and teachers acting as coaches. The organizers of the practitioner center decided on a 5-part format which is covered in an intensive 3-day workshop developed by the Los Angeles Unified School District (California) to inform interdisciplinary team organizations from various middle schools. The five parts include: expanding the knowledge base and rationale for middle school reform; the teaming process; Cooperative Literacy (which provides a management and instructional protocol for implementing more active collaborative and cooperative learning); integrating the disciplines; and assessment. To accumulate some data reflecting the degree of implementation of reform ideas presented through the training, a follow-up survey was mailed to 182 participants. Returns yielded a sample size of 60. Response analysis suggests indicators of trends regarding areas toward which teachers are able to move as they confront the middle school reform issue at their own schools. A copy of the survey is included in the body of the paper. (LL)
The world of education depends on a vast body of research and information to allow current trends, innovations, and theories to be put into established practice. Without this permeation, education cannot maintain an even pace with societal demands. To date, many feel that education lags behind because the means of providing teachers with assistance to improve their craft are not embedded in the world of education. Gallimore and Tharp, in Teaching Mind in Society, indicate that "The acquisition, enhancement, and maintenance of specific individual competencies are the conditions for survival of all institutions from the post office to the church, to the school district...because such institutions have a limited commitment to teaching, they rarely conceive their relationships to personnel as teaching through assisting performance."

However, it is maintained that schools should be responsible for assisting all members, from kindergartners on up through the superintendent. In other words, the tradition of school has reflected the absence of transactions between teachers and teachers, as well as teachers and administrators at the school site and the central office. The attempt to invoke a means of non supervisory assistance employs peer collaboration to maximize the potential for cooperative ventures between teachers (practitioners) and schools to the extent that classrooms begin to reflect the necessary changes in practice to benefit students.

The purpose of a professional development program is to provide for a means to facilitate training and professional growth. An indicator of this growth is the application of current trends, theories, innovations, and methodologies which enhance the delivery of curriculum at the school level. Student outcomes in areas of academic achievement, personal, social, and psychological growth and a sense of belonging are contingent upon schools and teachers moving forward in their efforts to incorporate, facilitate, and provide a means to improve their art. And perhaps most importantly, teachers must be able to coach and develop the skills of fellow teachers through direct coaching efforts, or by example.

One innovation which provides a vehicle for a transactional approach to teacher growth and professional development is through the concept of a practitioner center which will be described throughout this document. The implementation of
teacher centers began in 1976, as stated in *Continuing to Learn: A Guidebook for Teacher Development*. These centers were local school-district sites where working teachers could pursue professional improvement directly related to their own classrooms, and where the improvement program would be overseen by a policy board. The important idea concerning these centers is that they differ from other in-service deliveries because they emphasize individual concerns, and they utilize teachers as part of the decision making body. Furthermore, they provide practical solutions to everyday teaching challenges and provide continuity for assistance.

Some current efforts across the nation which are significant to the middle school aged student include a $1.1 million dollar grant to the University of North Carolina's Center for Early Adolescence to enhance the preparation of teacher training for the middle school student. Much of the thrust of the training at the North Carolina's center will involve the need to make middle grade curricula more interdisciplinary and exploratory through the integration of such subjects as science, social studies, and the arts.

Other current efforts involve the New York Teacher Center Consortium in which teachers visit the centers that are run by teacher specialists selected on their ability to assess needs, work with peers, and who have demonstrated an understanding of teaching and learning. In Pittsburgh, the Schenley High School Teacher Center served the staff development needs. Teachers from all high schools took part in a full time eight week course at a high school with an integrated population of one thousand students. The purpose of the course was to allow teachers to expand and refine their skills, update information and research, increase sensitivity to adolescents, and enable teachers to follow through on individual and interactive plans for professional growth. Additionally, the Practitioner Center involves a network of teachers who will serve as leaders and peer coaches who will reflect the efforts of change in school and classroom organization, instructional methodology, and interdisciplinary instruction. A study released by *Education Week* found that fewer than one in five middle grade teachers received specialized training in early adolescent characteristics.

A more important factor is the concept of Practitioner Center as an ever evolving entity; teachers who attend the three day session become part of a large network of teachers who continue to share and dialogue with teachers within the network, as well as with colleagues at their own schools apart from the Practitioner Center. There is tremendous potential for articulation of ideas, sharing of
technologies, and addressing areas of change including instructional methodology, classroom management, and school wide change with respect to middle school issues.

In the recent past within the Los Angeles Unified School District, school and teacher support was provided predominantly by teacher advisers assigned to elementary districts, the middle school unit, and senior high as well as other divisions. The numbers of advisers were never sufficient to provide the adequate kind of advisement efforts needed to involve teachers in the complex process of building an interdisciplinary team, of constructing an interdisciplinary thematic unit, or understanding and manifesting an integrated thematic approach which explores all facets of curriculum. As a part of this new approach, new ideas concerning classroom management need to be explored to support this process. Since the advisers were out-of-classroom personnel and were not assigned to a particular school site, they were not often viewed as peer leaders by classroom teachers. For these reasons, this model, although decentralized, was not adequate to support the needs of schools and teachers.

A totally central model for professional development is not able to supply direct quality services to individual schools and classrooms for many of the same reasons as those previously mentioned. The concept of the Practitioner Center provides a means by which schools and individuals have access to professional development in the area of middle school reform, high school reform, and integrated thematic instruction. The Practitioner Centers incorporate the concept of peer leadership with "teachers teaching teachers," and teachers acting as coaches. The schools who send teacher teams to the Practitioner Center will receive sustained support to work on improving instruction, curriculum development, and the use of educational innovations. Some of the key features for the Practitioner Centers include:

* a school location where teachers meet, plan, view implementation of these ideas which reflects theory in practice
* experience a variety of training activities conducted by resident teachers as well as a facilitator
* materials for personal and professional growth either created by Practitioner Center researchers, or supplemented with educational literature and research
Resources relating to schools' and teachers' specific needs with respect to middle school reform and philosophy interdisciplinary teaming, thematic unit writing, and current trends in authentic assessment

current research related to teaming, interdisciplinary instruction, effective teaching, peer coaching

organizational arrangement for teacher development to take place within a school context involving actual in-classroom simulation, on site coaching, and collaboration with teams from other schools to further the network of interdisciplinary teams involving follow up, inservice, and workshops

A recent article in the ASCD Update noted that teachers in schools across the country are taking steps to make their instruction more interdisciplinary. Ben Ebersole, professor of Education at the University of Maryland noted that

"Merging the disciplines in selected areas improves learning in several ways...When students see relationships among the subject areas, they see increased meaning in what they are studying. As a result, students are more motivated, and interdisciplinary studies require high level mastery."

The aim of the Practitioner Center is to provide a forum for teachers who are on an interdisciplinary team to come together to experience the processes involved in collaborative planning, thematic instruction, interdisciplinary unit writing, assessment, and an instructional methodology called Cooperative Literacy which supports the interdisciplinary structure. The ultimate goal of the Center is to increase the number of interdisciplinary teams at school sites in order to develop the critical mass necessary to effect change in instructional delivery as addressed by middle school reform. Through this effort, a network of practitioners in the area of interdisciplinary instruction was created allowing for district wide expertise in this area to develop at the classroom level.

In conceptualizing the Practitioner Center, we decided on a five part format which is covered over a three day intensive workshop. The teachers who attend comprise interdisciplinary team organizations from various schools. Los Angeles is in a somewhat unique situation in that there are eighty middle schools, some of which are on a year round multi-track schedule, some which are still configured at grades seven through nine, and some which are recently reconfigured to grades six through eight. There is virtually no tradition of teaming, though on occasion there
has been some spontaneous teaming and interdisciplinary work, as in the case of the history and English teacher who teamed up on a unit. However, teachers may not have actually shared common students throughout all of their classes.

**The Format**

The format for the three days has five parts. The five parts include: expanding the knowledge base and rationale for middle school reform, the teaming process, Cooperative Literacy, which provides a management and instructional protocol for implementing more active collaborative, and cooperative learning, integrating the disciplines, and assessment.

These parts are designed to accommodate teachers who may have a lot of information, some information, some misinformation, or no information regarding middle school reform. In the ensuing dialogues which precede each section of the training the facilitators can assess the level of knowledge within the group. To date, we have found that some teachers have been informed about one or two of the different parts of the format, but no group has known an extensive amount about all of the parts.

**Middle School Philosophy**

Los Angeles has been attempting to move the middle school reform "agenda" for some time. Several schools reconfigured during the last decade, and some schools show a reorganization which reflects some middle school reform. There are schools which are organized under a "house" plan, and others which reflect a "family" or "community" organization. Given the fact that reorganization alone does not necessarily mean substantive change in the middle school climate or culture (Arhar, 1993), it was our intention to establish a common ground of base knowledge about middle school reform, reasons for the reform, and potential organizational structures which facilitate and truly reflect reform efforts.

To approach this knowledge base we have drawn from a variety of sources and publications from the National Middle School Association, the Association of Supervision and Curriculum Development, and *Caught in the Middle*, the definitive source for middle school reform in California, published by the California State Department of Education. We have found that there is a wide range of knowledge
about middle school reform. During the ensuing dialogues, the teachers are regrouped so that each person is in a group or pod with teachers from different schools.

Of the two hundred plus teachers who came to the Center this year, more than half knew little about the middle school reform efforts. Of those that were familiar with the middle school reform, many did not quite understand how their schools could change to reflect the reform efforts in terms of teaming, utilizing cooperative organizational structures with teacher teams as well as student teams, or how they would collaborate to produce integrated thematic units.

To ameliorate misinformation or a lack of information about middle school reform, the first part of the training involves dialogue about the clientele, the middle grade student. As a result of this exploration, certain issues are discussed in terms of implications for change at the 6th through 9th grades which speak to the middle school reform. Ultimately, the teachers understand that the way things “used to be” are not necessarily in the best interests of this particular age group. Of course the next question begged concerns as to how we can change things to make schools better for this age group, and also better for teachers of this age group.

**The Teaming Process**

The teaming process provides some interesting insights into one of the major sticking points in middle school reform, which may or may not be particular to L.A. Angeles. Teaching has maintained an isolated situation in the sense that most teachers quite naturally “do their own thing” and have done so for many years. The fact of the matter is that it might be unreasonable to assume that adults will automatically work together, particularly when heretofore this dynamic has not been a part of the job situation. Some teams are in arranged “marriage” situations. Some team members do not always get along, and some teams have not quite figured out how to meet on a regular basis. Some of the failures for adequate meeting time involve a lack of common planning time, teachers teaching six instead of five classes, or teachers’ involvement in mixed grade levels, which in effect makes them part of two teams.

The second component of the training involves exploring the organization of the interdisciplinary team. Our position is that the ITO is the hub of the middle school reform. Despite our efforts and suggestions that interdisciplinary teams be sent to the Center, rarely was a full team present at the same training session. In fact,
several schools sent numbers of teachers, who were not teamed in any capacity. The thinking was that after the training, the teachers would become a team either for the next semester or the next school year.

We spend a good portion of the teaming segment providing teambuilding activities, and engage the teacher in some self-examination activities. Among these are the Myers-Brigs Temperament Sorter (Kiersey, 1990), and an “Organizational Strengths Inventory” which we created (figure 1.) The purpose of the teambuilding is to provide opportunities for the teams to become cohesive. Some strategic planning issues are discussed such as the development of team norms, requirements for a successful meeting, and a format for holding meetings, which they create. The team meeting format includes ways to establish an agenda, and a discussion of various roles teachers play in a team organization. The “Team Role Organization” (figure 2) we have created presents to teachers roles and responsibilities that need to be addressed for the successful implementation of the ITO. The roles of Team Leader, Team Manager, Curriculum Coach and Parent/Community Liaison are guidelines for team members that can be explored and expanded depending upon the needs of the particular team and school.

Upon further examination of articles and review of literature on teaming, there does seem to be a resolve on the part of the teachers to enhance their “teamness.” However, when the teams return to the school they may face the scheduling constraints which inhibit the further development of the team.

**Cooperative Literacy**

The third component of the training involves an approach which we call “Cooperative Literacy.” Some of the learning approaches advocated in much of the middle school literature and research involves the use of more cooperative and collaborative learning, more activity on the part of the students, and a somewhat different appearance of the middle school classroom. The Cooperative Literacy Approach (Klemp, Shorr, Hon, 1993) provides a two faceted approach to classroom organization which facilitates active and cooperative learning.

As a segue into discussing change at the classroom level, we involve the participants in a scenario which we have titled “company store.” The scenario is designed to stimulate some new thinking about the role of the teacher in a setting which involves management, apart from the focus on curriculum. Despite the
scenario's obvious analogy to the classroom, the teachers usually generate a very interesting list; interesting in that the items are usually consistent from group to group, and interesting because generally the ideas which they generate challenge established practices in the classroom, for most teachers.

After conducting twenty or so sessions, we have found that the most common items listed on the scenario are:

- employee empowerment
- mutual respect
- meaningful work
- team organization
- an incentive program
- good communication between manager and employees
- variety of jobs
- allowing the worker to choose what jobs they would like to do
- employee recognition.

After these ideas are displayed, we suggest that in order to determine if these techniques are working, somewhere between 70 - 80% of the employees would experience aspects of these management strategies. The remainder of the discussion involves incorporating these strategies into the classroom, for that becomes the company. When we discuss ways in which these ideas are implemented, the participants are hard pressed to come up with tangible evidence that seventy to eighty per cent of the students, in most schools, or even one school would experience implementation of these strategies. Usually teachers will suggest that an incentive program potentially exists for all students. However, to meet our conditions for success, the incentive would have to be earned by seventy to eighty per cent of the students for it to be considered successful. From that point, we focus on the classroom and the Cooperative Literacy approach to address some of these issues.

The first component of the management strand involves the use of a classroom social organization based upon learning teams, or Pods. Students are in pods each day, either for a traditional lesson, or for a cooperative lesson, and the class is managed on the basis of these pods.

Another component of this strand involves the management of classrooms based on a team model. This innovation includes the role of a teacher who acts as the "team manager." This role gives a central figure on the team responsibility for
mediating discipline issues with students. When a situation arises which the team manager must address, such as a class disturbance, the teacher and the pod of students are involved in the process of mediation to resolve the situation.

Part of this component on management involves exploration of discipline programs in the middle schools which are typically abysmal in terms of the numbers of problems and situation which require some adult intervention. Of course discipline issues always involve students who are sent to offices. To offset the tradition of many ineffective discipline approaches, the teachers explore the development of a new pedagogy for discipline on the team. In a sense, the teachers' roles as organizational leaders are explored, changing the paradigm about who controls whom. Also, a new protocol for discipline is also established based on concepts described in "A Meta-View Approach to Discipline for Middle Schools" (Klep, Shorr, Hon, 1992).

The second strand of the Cooperative Literacy Approach involves a series of instructional strategies which are either cooperative or collaborative. The teachers participate in simulations of the instructional component. Through this part of the training, teachers begin to understand that fundamental changes in the climate and culture of the individual classrooms are at the heart of the middle school reform effort. Our data reflects that some of the cooperative structures shared in the training have been implemented or attempted at the schools when the teachers return. This development is important, because teachers realize they need not have to wait for their teams to be established before trying out in their classrooms some of the ideas presented.

**Integrating Curriculum**

The fourth component of the training involves the exploration of how curriculum is integrated. It is our belief that teachers may not be ready to explore and actually produce integrated curriculum until they have developed as a team. If attempts are made to have teachers integrate curriculum, there are possibly two criteria which must be in place: teachers teamed, and students in a block program. Many of the organizational and program patterns of a school present problems in scheduling which resist solution. Therefore, we find that some teachers are only sharing part of a block of students. Despite these constraints, it is important for teachers to have an experience in developing integrated curriculum so that they get a
sense of how powerful and how invigorating the development and control of what is taught can be, as teachers create the curriculum for their students.

It has been our finding that teachers offer a more traditional concept of what comprises curriculum. Despite efforts to explore curriculum integration, most secondary teachers who have a single subject area credential define their teaching in terms of their subject area. It has been the occasion that some of our trainees who moved up from the elementary school to the middle school have more of a grasp of the potential for integrating subject areas to a thematic approach. Beane, in a current issue of Research in Middle Level Education (1993) considers that many curriculum proposals fall short of the pedagogy he suggests. Beane advocates a constructivist viewpoint of curriculum integration where the lines of different subject areas dissolve, and that there are no distinguishable barriers between the subject areas. This approach frees teachers to work jointly with students to create the curriculum from the questions students ask, and from the facilitative expertise which teachers bring to the process.

The middle school curriculum has been categorized as one in which students explore much of the world around them. Exploratory classes such as art, music, vocational classes offer students potentially rich and varied experiences. However, the concept of exploration within the academic areas has proven to be arduous. The significance of integrating curriculum is not lost on the teachers: Students who engage in exploratory curriculum adventures within the academic areas realize an opportunity to understand how different subjects are relevant to in school as well as out of school experiences (Toepfer, 1992 p. 217). Students also have an opportunity to be better prepared for high school because their knowledge base is broadened. It is interesting to note that some teachers equate middle school reform with lightening the curriculum load. Our response to the issue of quality versus quantity is to note that a “no pain-no gain” mentality with respect to curriculum produces bored and detached students who labor (or not) in isolation in many middle school classrooms.

Participants go through a process in simulation of orchestrating an interdisciplinary thematic unit. Some planning time is devoted to allow teams to begin to work toward a plan. However, as stated previously, this practice is somewhat fallacious for those who have not come in working teams. It is our belief, however, that the process engages teachers in dialogues and conversations about curriculum, something which many teachers may not have the opportunity or the likelihood to discuss.
**Assessment**

The inclusion of an assessment component seemed logical in light of the time spent on developing an integrated thematic unit. In this sense, if we are going to create curriculum, perhaps we should also think and reflect on how new ideas concerning assessment come into the picture. For instance, drawing on some of the ideas presented by Alfie Kohn (1991) and Jay Bonning (1993), if we are establishing a cooperative structure, and if we are going to provide for more successful outcomes for students, the mind set of the bell curve needs to shift. To this end, we engage teachers in some thought about what assessment issues are raised through such paradigms as Total Quality Management as it applies to the ITO.

Teachers have had interesting responses when the idea of assessment is explored. Given the notion that the pencil and paper test may give way to or may be supplemented by either performances or projects, we have seen teachers begin to redefine what they consider to be adequate measures. We do not ask teachers to abandon what established practices they have developed with regard to testing. We might offer alternative ways to test or to assess, including ongoing assessment through all components of the assignment. In some instances, it has provoked some interesting discussion because some people are not comfortable with an abundance of A’s and B’s on tests or other measures. In fact, some teachers, upon learning that most of their students scored in the A or B range, have stated that the measures probably were “too easy.”

**Follow Up Survey**

We were interested in accumulating some data which may reflect the degree of implementation of the reform ideas presented through the training. The survey (figure 3) was mailed to one hundred eighty two participants who were part of the three day training. The return of the surveys yielded a sample size of sixty. Through an analysis of some of the responses, we see some indicators of trends with respect to what areas teachers are able to move toward as they confront the middle school reform issue at their own schools.
During this year we will be collecting some data regarding the Center. Prior to the training would you take a few moments and respond to the questions below. If you are not sure of what your response should be, circle number 1.

Please circle the appropriate number in relation to your response. 
#5 is high, #1 is low.

1. Our team is functioning as an interdisciplinary team.
   5  4  3  2  1

2. Our team meets regularly to plan instruction.
   5  4  3  2  1

3. Our team has taken control of discipline issues.
   5  4  3  2  1

4. Our team is now using common planning time.
   5  4  3  2  1

5. Our team is using pods for classroom management.
   5  4  3  2  1

6. Our team has planned a thematic unit.
   5  4  3  2  1

7. I use many cooperative learning strategies.
   5  4  3  2  1

8. I have tried the Fact Storm.
   5  4  3  2  1

9. Members of my team would like at least one additional follow-up day.
   5  4  3  2  1
10. My team has assumed more leadership in moving the middle school reform.

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The results of the survey are listed below with a discussion of the questions. In some instances questions were grouped together to yield some inferences about what was transpiring in the classrooms and at the schools.

Questions one and two were asked so that we could determine what the teachers' perceptions were about their becoming a team. Thus the idea of functioning as an ITO, and beginning to meet regularly to plan for instruction would correlate under our definition.
It was our assumption that some of the date would be predictable given the fact that most of the Practitioner Center participants had little or no experience with an interdisciplinary team as being a functional cadre. Teachers were sometimes teamed, but did not reflect their "teamness" either in coordinated efforts with respect to management or methodology, or instruction.

Responses

Although it had been requested that teams attend the training, we found that many of the teachers were either not teamed, or were teamed ceremoniously. The rate of functioning as true interdisciplinary teams in terms of the most rudimentary definition through common planning time were revealing. Items #1 and #2 indicated that slightly over half of the sample did not view themselves as a true interdisciplinary team, and slightly more than half were not meeting to discuss curriculum.

In response to question #3, slightly more than half of the teachers felt they were taking more control of discipline issues, though it is difficult to say whether or not the team's influence is apparent. This response could indicate that of those teachers who are teamed, though they may not be moving as quickly in the area of curriculum integration, they may be undertaking more of the management issues which confront interdisciplinary teams, particularly since we involve that component of team organization in the training.

Item #4 concerns the use of common planning time. While many teachers reported that they did not have common planning time in place, some teams were attempting to meet on a regular basis, if even for a half hour per week. The polarized responses to this item might reflect that of the teachers who are teamed, there is a concerted effort to use common planning time in some form. For example, item #6 indicates disparity in the planning of thematic units, and reflects the same polarity as item #4, although as could be expected the low response is increased. This would indicate that though some teachers are teamed and are attempting to use common planning time, some teams have taken the leap to planning thematic instruction, though others have yet to undertake that emphasis.

Items #5 and #7 reflect the use of some of the management ideas and cooperative learning strategies suggested in the training. For instance, the use of "Pods" as a management protocol indicates some degree of implementation through the heavier response load at the top end (answers 5, 4, and 3). Item #7 which
concerns the use of cooperative learning strategies jumps to a higher positive yield on the responses. Also, items #5 and #7 reflect a fairly high correlation which could mean that teachers who are implementing "Pods" may also reflect the practice of using cooperative learning strategies more regularly, or more confidently. One of the activities which is part of the approach is the Fact Storm. In question #9 which specifically asks if teachers have tried the Fact Storm, there is a fairly even spread, though this result indicates that some are trying the approach which was not known prior to the training. These attempts could also suggest more confidence on the part of teachers to try cooperative learning.

Question #9 indicates that most of the teachers would like at least one additional day at the training. The response to #10 suggests that some teachers are inclined to be the "spark plugs" at their schools by assuming more leadership in moving the middle school "agenda" at their sites. It is suggested by the trainers prior to departure from the training that teams attempt to get themselves in place, and we discourage them from taking on the mission of changing the school. However, the response spread would indicate that some teachers are willing to become involved in establishing more of the middle school reform at their sites.

Conclusion

As the second year of implementation of the Middle School Practitioner begins we are attempting to collect more baseline data. Our objective is to determine the significance of the training in the establishment of true interdisciplinary teams which begin to become more self-regulating with respect to their involvement with student management issues and the development of interdisciplinary thematic units. As we began the training, we had an understanding of the inability of many school sites to move the middle school reform agenda due to a myriad of constraints stemming from scheduling conflicts which prevented the occurrence of common planning time.

The fact that many teachers were low in morale due to recent salary cuts, and the fact that many teachers either resisted or resented adding something new to their workload also seemed to effect their tendency to seek innovative approaches. It is our feeling that the training we provide not only focuses teams on their true mission, but also provides some support and some degree of innovation in classroom practices which are not only appropriate for the middle school child, but are very "user friendly" for the teachers. These innovations allow the teachers the opportunity to
implement changes at the classroom level first, and may eventually allow the teams
to become cohesive instructional planners.

Bibliography

through the lens of school restructuring. Research in Middle Level Education., 15, (pp. 1-9)

Beane, James, (1993). Research and evaluation for a "new " curriculum. Research in
Middle Level Education. 16. 1-6.

Gallimore, R. & Tharp,R. (1990). Teaching mind and society: teaching, schooling,
and literate discourse. In Moll, Luis (Ed.) , Vygotsky and education , ( pp. 175
-205). New York: Cambridge

Klemp, Hon, Shorr. (1993). Cooperative literacy in the middle school: an example
of a learning strategy based approach. Middle school journal, 24, (pp. 19-
a26).

Regional laboratory for Educational Improvement. (1987). Continuing to learn: a
guidebook for teacher development. Ohio: National Staff Development Council

Teopfer, Conrad. (1992). Middle level school curriculum: defining the elusive. In
Transforming middle level education: perspectives and possibilities. Boston:
Allyn and Bacon