The four-phase project, Toward Individualized Instruction, is a school-university partnership designed to meet the needs of physical educators for relevance during preservice teacher educators and individualized instructional programs. During phase one, students fulfill the following course requirements as they relate to their field base: (a) complete separate observational and instructional field experience; (b) construct individualized learning packets; (c) develop teaching strategies; (d) microteach; and (e) analyze teaching behavior. During phase two, the student undertakes independent study and assists with the instructional or activity program at the field base. During phase three the student progresses through four developmental levels: adjustment, support, lead, and independent teaching. During phase four, the graduate is aided in job placement, and professional consultation and resources are available in the design of instructional materials and teaching strategies appropriate to the new program. (Author/PD)
Individualized instructional techniques have gained widespread popularity and use by teachers in nearly all subject fields and grade levels. Individualization shows the most promise for solving the problems of providing a teaching-learning environment that will allow the learner a degree of independence and to compensate for the wide range of physiological, psychological, and sociological variances found in most classrooms.¹

Even with increased usage, professional teacher training programs and public schools with a traditional or conservative philosophy have not responded in general to the individualized instructional theme characterized by: (1) lack of innovative approaches in the development individualized instructional materials and methods in physical education professional preparation curriculums, and (2) the lack of development and utilization, in part or in total, within most public schools. This is probably attributable to the problems created by introducing an individualized theme in teacher training programs and in public school in-service teacher education. Some of the identified problems are:

1. Designing individualized instructional materials is extremely time consuming and tedious.

2. Developing individualized instructional techniques requires a progressive, systematic procedure to allow for pilot-testing, modification, implementation, evaluation, and refinement.

3. Learning individualized instructional skills and teaching strategies requires knowledge and practice utilizing a variety of teaching styles.

4. Vehicles to facilitate the sequential design of individualized instructional materials are generally inadequate.

5. Preparing individualized instructional materials in professional courses lacks relevance because there is no identified field base for the pre-service teacher. Projects are too often completed to satisfy course requirements where a promise is made that the product will someday be used. Unfortunately, there is a high incidence of unfulfilled promises leading to frustration and skepticism on the part of pre-service teachers.

6. Commitment and cooperation between higher education and public schools to move theory and practice closer together is lacking.

7. Released time for the public school teacher to acquire skills and develop materials is insufficient.

8. Sources of financial support are limited.

9. Educational research in physical education with regard to the effectiveness of individualized instructional learning skills, acquiring knowledges, and developing favorable attitudes is incomplete and restricted.

10. Student teachers are too often viewed by cooperating teachers as a full time substitute.
Utilization of individualized instructional techniques and traditional instructional methods is imbalanced. "Individualized instruction is not a complete substitute for traditional instruction. It should be one of many methods in any teacher's repertoire." 2

The reciprocal school-university partnership project initiated by the authors was stimulated by a desire to improve the learning opportunities of both the pre-service teacher and public school child. It is an attempt to solve the previously identified problems, meet the challenges of re-shaping professional preparation, and to direct traditional teacher training programs and public school curriculums in a systematic, transitional manner "Toward Individualized Instruction."

ORGANIZATIONAL DESIGN OF PROJECT

For many years Colleges of Education have been aware of a growing problem in providing effective intern experiences for pre-service teachers. The rising number of students, the difficulty of providing information and know-how on current school problems, the increasing costs of supervision, and the difficulty of weaving the various facets of the school program into a meaningful picture have caused grave concern over the effectiveness of present teacher preparation programs. 3 This professional concern is compounded today by the public schools' financial crisis which has forced too many schools, "lighthouse districts" included, into maintenance instructional programs. The result has been the need for a program design that would aid and enrich the learning of both the university teaching preparation student and the public school child.

2 Ibid., p. 20

In September of 1973, a model partnership project entitled "Toward Individualized Instruction" was initiated between Cleveland State University, Department of Health, Physical Education, and Recreation, and Euclid Public Schools, Forest Park Junior High, Euclid, Ohio. The overall plan consists of having six Cleveland State University physical education majors, two per quarter, student teach at Forest Park after first orientating through an extended field experience, and systematically developing both individualized instructional materials and teaching strategies.

Phase I of the project begins when, prior to student teaching, the Cleveland State physical education major enrolls in Curriculum and Methods in Physical Education which is a 12 hour block course that meets four hours daily over a period of ten weeks. During this time, labeled as the Curriculum and Methods Quarter, student applicants are selected and identified as a "teacher aide." As a "teacher aide," the students fulfill all course requirements except that they are completed as they relate to the curriculum and instructional design of their field base, Forest Park Junior High. The major course requirements related to the project include: (1) separate observational and instructional field experiences; (2) construction of individualized Learning Activity Packages (LAPs); (3) development of teaching strategies (Mosston's Spectrum of Teaching Styles); (4) microteaching; and (5) analysis of teacher behavior (Flander's Interaction Analysis System). In Phase II, the Instructional Development Quarter(s), the student is identified as a "teacher assistant" and is expected to undertake related independent study, and to assist as much as possible with the instructional or activity program at Forest Park. Having successfully completed the expectations of

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Phases I and II, the student enters the Student Teaching Quarter, Phase III, as an "intern" and progresses through four developmental levels; namely: (1) adjustment; (2) support teaching; (3) lead teaching; and (4) independent teaching. Upon project and university graduation Placement and Follow-up, Phase IV occurs and the "intern" is professionally labeled a "teacher" and aided in job placement. Subsequent to employment, professional consultation and resources are available to assist the project graduate in the design of instructional materials and teaching strategies appropriate to the new program and job setting.

The four phases of the project are described in detail below.

**PHASE I
CURRICULUM AND METHODS QUARTER**

The ten week block curriculum and methods course provides an adequate opportunity to select project participants, observe Forest Park students, analyze cooperating teacher, design basic LAPs, develop teaching styles and materials, apply LAPs at Forest Park, and refine LAPs and teaching styles for use in student teaching at Forest Park.

**Selection for Project**

Pre-service teachers at Cleveland State University are introduced to the project during the first week of instruction. Volunteers are solicited which includes a distribution of students who will student teach over the following three quarters. Final selections are made after the observational field experience and are dependent upon: (1) willingness to develop LAPs for Forest Park students; (2) agreement to participate in instructional development experiences; (3) commitment to student teach at Forest Park; and (4) elicitation of positive teaching behaviors during observational field experience, as demonstrated in a commitment to the profession and the school child. All project participants are selected by mutual agreement between the university instructor and cooperating teacher.
Observational Field Experience

A one week observational field experience is conducted during the second week of the course. Pre-service "teacher aides" attend Forest Park from 9:00 a.m. to 1:00 p.m. under the supervision of the cooperating teacher. The purposes of this experience are for the "teacher aides" to:

1. Inquire into the organizational and administrative design of the school system.
2. Confer with pupils and teachers on objectives, selection of technique, discipline, organizational routines, scheduling, individual class characteristics, and administrative responsibilities.
3. Observe and analyze extensively Forest Park students and their community so that curriculum materials may be developed suitably.
4. Know and discuss Forest Park philosophy and that of the physical education department.
5. Investigate the organization of physical education department.
6. Identify and analyze the instructional design of the physical education program.
7. Observe and analyze the techniques and teaching behavior of cooperating teacher.
8. Identify a variety of teaching techniques, teacher behaviors, and learning experiences which could be used successfully in the future.

LAP Design

Learning activity package materials are developed during the next several weeks in the regular course offering. The university instructor serves as a facilitator for this undertaking. For those students who are not selected for the project, the
process continues as the package design is a course requirement but lacks relevance gained by the project participants. The learning experiences are organized around the development of instructional competencies and interactive skills which include: (1) discussions concerning the learning characteristics of adolescents; (2) discrimination between behavioral and non-behavioral objectives and classification appropriately into the cognitive, affective, and psychomotor domain; (3) participation in skill labs in the area of measurement and evaluation; and (4) selection and use of appropriate media and materials for development of LAPs. The student culminates activity in this part of the course by submitting the first draft of all LAP components for thorough review and critique.

The LAP is a systematically designed instructional unit organized to facilitate the learning of a skill, concept, generalization, or problem to be solved, while providing a substantial opportunity for individual learning options. Pre-service teacher trainees in the project write LAPs in content areas of the Forest Park curriculum which are offered during the projected student teaching quarter. The LAP components are described below.

Rationale. The rationale explains to the student why the content is worthy of study and should introduce the content by defining the subject matter and the learning processes the student will be engaged in. It should also explain the importance of the content by touching on either or all of the following: (1) the student himself; (2) society; and/or (3) mastery of the subject. The statements should be designed in such a way that it appeals to the student and can be understood by him.

Learning activity package (LAP) design was developed by Marvin Pasch, assistant professor of secondary education at Cleveland State University. Dr. Pasch is one of the team teachers in the curriculum and methods course for physical education students.
Learner Analysis. A LAP is developed with consideration for the particular students for whom the package is designed. In this instance, Forest Park students are analyzed with reference to grade level and subject matter. What are their ages? Are they a mixed ability group? Quick learners? What have they previously studied which might affect their performance in the LAP? What estimates can be made about the students' probable level of motivation? These kinds of questions are addressed in the learner analysis. The field experiences at Forest Park provide an opportunity for the LAP designers to study and analyze the learners.

Objectives. Objectives are the product of transforming LAP content into specific instructional goals. Writing effective instructional goals involves the consideration of two variables. First, an objective must be clearly written. It should: (1) Describe behavior - what is it the student should be able to do, or how he should be able to think or feel when he completes the appropriate instruction (observable behavior); (2) State the terms - under what circumstances will measurement take place; objectives should be measurable and include the method of measurement (conditions); and (3) Identify criterion - level of acceptable performance should be included to help the teacher and student determine who have or have not achieved the objective (standard).

Secondly, consideration should be given to the educational worth reflected in the objective. An objective may be clear, concise, and properly written but is trivial, irrelevant, or of fleeting importance. Writing worthwhile objectives depends primarily on the rationale and learner analysis. A properly written rationale testifies to the designer's concern with the worth of the chosen content. The value of objectives will be enhanced if written for particular students. Consideration of students' needs, interests, abilities, and developmental level will assist in designing worthwhile objectives. Objectives must also reflect an understanding of the tasks involved in the learning of the content, whether conceptual or skill oriented. This process is labelled as task analysis.
Task Analysis. Task analysis is defined as a breakdown of major learning tasks into smaller more digestible pieces. The benefits of a task analysis are to:
1. determine what students need to know or be able to perform in order to begin the task; entering proficiency;
2. surface possible instructional objectives; and
3. sequence the various learning tasks in some progressive order to avoid learning pitfalls.

An instructional program for the purpose of teaching passes in volleyball is a good example. An analysis of the tasks involved could lead to a number of objectives directed toward different learning outcomes. You might teach the concept of stability when returning a service or creating time when passing the ball to a teammate. The actual skill development in bump passing or digging the ball with either hand would also be taught along with the strategies for use. It can be seen that each volleyball passing technique becomes a sub-task which is then further analyzed and refined.

Learning Activities. It is through activities that the student actually experiences the behaviors set forth in the instructional objectives. In physical education, demonstrations, drills, and lead-up games are common learning activities. However, these are not the most suitable for individualized instruction. The use of task cards, reciprocal student evaluation (partners or small group), videotaping for self-evaluation, film loops, individual teaching stations, and programmed materials are more common activities in IAPs.

Evaluation. The process of evaluation is designed to find out how well the instructional objectives and activities have met the goal of increasing student learning. In order to assess the magnitude of student learning, pretests must be given to determine entering skill and knowledge levels. Information gained from pre-evaluation translates into instructional decisions. Students should be provided opportunities during completion of the IAPs to receive feedback about
their progress through a variety of techniques; namely, self-evaluation, partner evaluation, or teacher evaluation. Evaluation of student performance is a necessary feature of instructional development but not necessarily for the affixing of grades on report cards. Since the purpose of instruction in the LAP system is to produce changes in student behavior (described in objectives), LAP evaluation is the process for determining the degree to which these behavior changes are being achieved through the selected activities. LAP designers develop evaluation procedures which yield useful data about student learning by observing the following guidelines: (1) Harmony of purpose - there must be consistent "fit" between the evaluation and the objectives and activities; Confusion arises if the teacher teaches one thing, and tests another; (2) Comprehensiveness - evaluation techniques should be sufficiently broad and deep to adequately sample the LAP objectives; a broad selection of test items as well as a variety of evaluative methods should be employed; (3) Diagnosis - the results of evaluation should offer a diagnosis of the performance levels; evaluation procedures should be designed at the same level as the instructional objectives; and (4) Validity - the instrument or method used must be capable of collecting the evidence which it was designed to collect.

Teaching Styles Development

The development of a range of teaching behaviors occurs during the same time period in which the LAPs are designed; i.e., weeks three through five. Basically, the students describe, demonstrate and explain the implications of Mosston's Spectrum of Styles. Task cards, reciprocal learning activities, individual programs, and lessons using guided discovery or problem solving techniques are designed in class prior to the actual production of the styles. Students are also exposed to methods of interpreting and systematically observing classroom verbal and nonverbal interaction in terms of a given concept or strategy. Interactive skills and competencies are developed such as using attending behaviors,
giving directions, questioning, accepting feelings, praising, clarifying behavior, giving feedback with evaluative comments, and accepting behavior without praise. The application of these teaching styles and interactive competencies occurs in a variety of ways during the remaining segments of the course.

**Microteaching**

The sixth week of the course provides an opportunity for the students to practice teaching techniques in small modules. Production groups are formed for the purpose of demonstrating a range of teaching styles. Each group is responsible for approximating a particular teaching style such as command, task, reciprocal, individual program, guided discovery, and problem solving. Students teach their colleagues, who role play and simulate a learning environment, some scaled-down version of a learning activity in physical education or some aspect from their LAP while employing the appropriate style. Microteaching includes videotaping and playback for the purpose of instructor evaluation and self evaluation. Verbal and nonverbal communication techniques are also systematically analyzed through the videotape process utilizing an adaptation of Flanders Interaction Analysis System.

**Instructional Field Experience**

The two-week concentrated field experience (weeks seven and eight) mutually affords opportunities for the Cleveland State "teacher aide" to develop instructional skills and for Forest Park pupils to engage in valuable learning experiences. Since the content offering at the time of the experience is likely to be different than the content prepared, the pre-service "teacher aide" is primarily concerned with teaching strategies and interactive skill development. Project participants are encouraged to:

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1. Test-out aspects of the LAP and selected teaching styles on the exact Forest Park learner population for whom the materials and strategies are planned. Small groups are formed to allow the trainee to "practice" some ideas, enriching pupil learning.

2. Prepare lessons and instructional materials, tutor, assist in logistical routines, administer tests and post grades, teach specified skills to selected pupils, facilitate small group work, and reinforce the process of reciprocal teaching.

3. Continually receive information about Forest Park pupils and environment that would assist in modifying LAPs and altering teaching styles.

4. Meet with Forest Park administrative staff and counselors, engage in small group discussions with cooperating teacher, and review previously developed instructional materials.

Throughout this entire process, both pupils and teacher trainees receive additional attention, not readily available under normal teacher-pupil ratios nor during supervised field experiences, respectively.

LAP and Teaching Styles Refinement

The final two weeks of the quarter are used for the completion of the LAPs and refinement of teaching styles. The cooperating teacher and project participant consult on an arranged basis where necessary before the LAP materials are submitted. Opportunities for microteaching are also available as a last minute check on some new idea. The final review of students' LAPs and command of teaching styles is conducted by the university instructor to fulfill the course requirement. Individual conferences are arranged for this purpose.
PHASE II
INSTRUCTIONAL DEVELOPMENT QUARTER

This phase of the project is designed for those participants who do not student teach during the quarter immediately following the curriculum and methods course. Participants who have an interim quarter between the course and student teaching take a reduced course schedule and receive credit on an arranged basis for completing some of the experiences and support duties described below. The major purpose of this phase is to provide continued and concentrated exposure to the pupils at Forest Park and for the Cleveland State pre-service trainee to further develop his teaching proficiency in a real world setting as a "teacher assistant."

Possible activities during Phase II are for the "teacher assistant" to:

1. Tutor on a one-to-one, one-to-two, or one-to-small group basis as the need and opportunity arises.
2. Direct, under supervision, athletic, intramural, or recreational after-school activities.
3. Research related areas of the LAP to be used during the student teaching quarter.
4. Teach classes in an assistant-teacher's role.
5. Prepare instructional materials.
6. Assist in the diagnosis of student needs and in the administration of evaluation techniques.
7. Attend professional meetings of faculty or PTA meetings as observers.
8. Participate in special events such as a family or all-sports night.
9. Develop and teach mini-courses in specific individual and team activities during the activity period of the daily schedule.
10. Receive additional feedback from pupils and cooperating teacher on IAP.
PHASE III
STUDENT TEACHING QUARTER

The traditional student teaching format does not suffice in an ongoing project of this nature where a concentrated number of teacher trainees have been professionally active at their student teaching site. The Student Teaching Quarter, Phase III, provides a transitional design for the two Cleveland State "interns" to adjust to the terminal goal of independent teaching. At the same time, it is necessary to establish project continuity so that Forest Park pupils are not constantly adjusting to unfamiliar roles and new behavioral and instructional expectations. This is accomplished utilizing the sequential student teaching model described and illustrated below.

Adjustment (Level 1)

A re-orientation to Forest Park is provided during the first week of student teaching. Since project interns would not have engaged in a full day of class scheduling through previous experience, an adequate time period is permitted for them to gain an understanding of the total organizational and administrative aspects of conducting the physical education program. Such routines as assigning lockers, issuing towels, storing equipment, and securing the facility are easily learned during the initial week. Interns also become familiar with other physical education and school regulations relating to lateness, unpreparedness, absences, and policies concerning discipline. An appreciation is gained for the daily schedule of physical education classes and the instructional management of these classes within the time allowed. During this transitional adjustment period, interns and pupils relate on a one-to-one or small group basis. Pupils, in general, begin to respond to the interns' presence.

Support Teaching (Level 2)

During the next three weeks, the cooperating teacher leads in the presentation of material and general class organization. The interns provide a supportive
role with responsibilities determined by the cooperating teacher. A team teaching approach is employed but interns remain teaching surrogates or assistants within this time span. Pupils continue adjustment and respond on an individual or small group basis.

Lead Teaching (Level 3)

The use of LAP materials is initiated during the next three weeks where the roles and responsibilities of the interns and cooperating teacher are reversed. The role of the cooperating teacher remains constant (supportive) while the interns alternate roles as lead teacher or support teacher. The proper utilization of the LAPs is facilitated by having more than one instructor available. Students are given more individual attention as a result of the reduced teacher-pupil ratio. The interns are completely adjusted to the pupils and are able to respond to both individual and class needs.

Independent Teaching (Level 4)

Interns are completely on their own for the last four weeks of student teaching to present materials, make appropriate decisions, and evaluate student learning. The LAPs are fully implemented during this final segment and the intern is able to approach independent status as a teacher. Depending on schedule, the other intern or cooperating teacher may provide supportive assistance when requested. Interns and students establish a new basis for a relationship and neither are dependent upon the cooperating teacher, although remaining accessible to both parties.
With this model, two student teaching interns work with the cooperating teacher each quarter. The concurrent assignment of two interns is important in that mutual support is provided for each other. In addition to this reciprocal support, each can be scheduled for primary responsibilities on an alternate day or alternate class period basis which offers the following advantages: (1) team teaching is possible; (2) time is allocated for interns to re-evaluate objectives and examine teaching performance; (3) interns observe each other; (4) release time is arranged for visitation to other schools for program examination; (5) cooperating teacher is able to communicate with non-teaching intern without interrupting the instructional process; (6) immediate feedback and reinforcement is more easily transmitted to the teaching intern; and (7) behavioral problems are minimized with maintained supervision of instructional and locker room areas.
During the first three levels, the cooperating teacher remains in the instructional area to preserve a consistent level of instructional and behavioral performance. This is necessary not only to provide continuity within a given quarter, but probably more importantly, within the nearly 200 days of the school year. The student teaching experience for project participants is supervised by the university instructor who teaches the curriculum and methods course in Phase I and co-directs the experience under Phase II. During the student teaching phase, interns engage in the normal activities planned for all student teachers. Interns attend student teaching seminars, utilize job referral and placement services, and participate in an exchange program, where a student teacher visits another student teacher in a different setting for two days.

PHASE IV
PLACEMENT AND FOLLOW-UP

The true value of any specialized teacher training project is in the product and the contribution of that product. The first three phases have been structurally designed and implemented to train teachers who can effectively write curriculum, relate content through individualized instruction, and possess a command of alternative teaching styles. The full effects of this project are realized, however during Phase IV when project graduates are placed and serve as disciples by advancing the individualized theme and the design of LAPs. As teacher trainees from the project obtain teaching positions, the possibility to exchange instructional materials and strategies and to create new centers for pre-service teacher trainees grows at an exponential rate. Therefore, the product is a "teacher" and the contribution is made to students at the new school and the profession through the development and utilization of individualized learning activities in physical education.
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With job opportunities not plentiful, the pre-service teacher who gains the experiences and competencies associated with this project becomes more marketable and attractive to school employers. Both the university instructor and cooperating teacher have assumed a major part of the responsibility to aid the project graduate in making use of his preparation by assisting him in obtaining a teaching position. Once placed, additional partnerships for individualized instruction are then identified where cooperating teachers were once pre-service teacher trainees. A never-ending network of physical education teachers, program, and schools become exposed to the design of individualized instruction as a result.

MUTUAL PROJECT BENEFITS

Most successful projects, especially those which are field-based, are characterized by a high degree of administrative feasibility, sound systematic planning, a practical organizational design, and monetary support. The last factor, that a "price tag" is usually attached to either a project's development or implementation, often discourages those who would be professionally stimulated by partnership projects of this type. From conception, the partnership project "Toward Individualized Instruction" has never had to face the problem of program finance. Monetary support in the form of a stipend, grant, or operating budget allocation was not required for either development or implementation. The project design provides both the Cleveland State University and Forest Park Junior High with off-setting non-monetary benefits. This eliminated much "red tape" and removed the main obstacle to most project undertakings. In general, the design of the reciprocal school-university partnership project reduces the magnitude of the problems identified previously and has resulted in the following non-monetary mutual benefits:

1. Adequate time is available to design individualized instructional materials and teaching strategies through curriculum and methods course offering.
2. Opportunities for pre-service teachers to test-out and implement IAPs are arranged in a real world setting.

3. Minor research projects are fostered for collecting data concerning the effectiveness of individualized instruction.

4. Learning opportunities and environment are improved for Forest Park pupils.

5. Student teaching experiences are improved and more relevant.

6. Theory (university) and practice (public schools) are moved closer together.

7. Self-renewal opportunities exist for both university and public school staffs.

8. Teacher-pupil ratios are reduced.

9. A mini-exposure to differentiated staffing is provided.

10. Doors are open to both parties to explore subsequent avenues of increased revenue.

11. Supervised pre-service teacher field experiences are conducted with a direct purpose.

12. Supervision of student teachers is improved.

13. Student teacher expectations are consistent due to prior agreement between parties.

14. Quality of instruction as well as standards of behavior are better maintained.

15. "Teacher as consumer" image of education is re-shaped to the "teacher as designer" concept.
SUMMARY

Colleges and universities have been remiss in training pre-service teachers in designing and implementing individualized instructional materials and techniques. As a result, there is a need to examine pre-service physical education curriculums and philosophies in both theory and practice; there is a need to provide relevant experiences in pre-service programs; and there is a need for a balance in the utilization of individual and traditional instructional techniques. From conception through implementation, "Toward Individualized Instruction" met these challenges and faced the educational mystiques of "how to better prepare the teacher" and "best educate the public school child."

The project designed and reported by the authors brings into partnership the university and public school which allow teacher trainees and pupils to interact and mutually enhance the learning experiences of each other. This field based utilization of the exact participants who engage in the teaching-learning process provides the "real world" setting so necessary for today's learning relevance. It also provides the foundation for the synthesis of traditional and individual teaching techniques into a program that judges itself and participants by professional standards which exceed levels of expectations maintained by the status quo.

8Annarino, op. cit., p. 23.