ABSTRACT
                A study explored how an ecological perspective in
human development, as conceptualized by Urie Bronfenbrenner, could be
used as an analytic framework for discerning patterns of
relationships among the environments of home, school, and work and
resulting implications for youth development. Three hypotheses were
tested regarding how linking youth participation in the settings of
home, school, school activities, community activities, work
experience programs, and work may account for variations in scores on
two scales measuring youths' perceptions of their communications with
adults. Three hundred twenty high school juniors and seniors from
Gainesville (Georgia) High School completed the questionnaires.
Analysis of covariance was used to determine patterns in the way the
environments of home, school, and work are linked and how they relate
to more positive scores on the dependent measures. In addition,
school personnel prepared in-depth descriptions of three programs
which placed youth in work settings as part of their education. The
most significant finding was that there is an ecology of youth
development that appears related to performance on such measures as
the two used. Recommendations for research were developed. (The
questionnaire is appended.) (A technical report of all phases of the
study is available as CE 027 941.) (YLB)

THE ECOLOGY OF YOUTH
PARTICIPATION IN WORK SETTINGS:
IMPLICATIONS FOR LINKING HOME, SCHOOL, AND WORK FOR
FACILITATING COMMUNICATION
BETWEEN YOUTH AND ADULTS

Summary

by

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FOREWORD

The work setting as an environment in which young adults learn about work roles and workers is assuming greater respectability with parents, employers, and educators. One could say that there is momentum nationwide to promote work experience for all young adults prior to leaving high school. Seeking to bring together the worlds of school and work, federal and local agencies have created a number of work experience programs. At the same time more and more youth are seeking part-time employment in conjunction with continued schooling. Our concern is that merely allocating time in school and work is not enough to promote positive developmental opportunities which could supplement prior experiences in school, home, and community.

Under sponsorship of the National Institute of Education, the Learning-in-Work Research Program at the National Center has conducted basic research on experiential programs which place youth in work settings as part of their education. The ultimate goal is that by better understanding how these programs work, research will assist in the eventual improvement of their design and operation. This is the final report of a two-year effort to understand how experience in interacting with older adults in a work setting together with prior and concurrent experiences contributes to youths' ease in communicating with adults and perception that adults can empathize with them. Data were collected to enable the researchers to apply a small part of Dr. Urie Bronfenbrenner's ecological model of human development to analyze youths' transition from school to work within an ecological framework.

For the conceptualization of the study we are indebted to Dr. Urie Bronfenbrenner, Jacob Gould Schurman Professor of Human Development and Family Studies, Cornell University. Dr. Bronfenbrenner kindly supported our desire to adapt part of his theory of a human ecology for this study. Further, his review of a draft of the study and suggestions for additional analysis contribute to planning future research.

Special appreciation is extended to Dr. E. S. Cook, Superintendent of the Gainesville City School District, Gainesville, Georgia; Charles Dyarmett, Supervisor of Vocational Programs, Gainesville High School; John Williams, Peggy Glass, Terry Edmonds, and Kay Young, of the professional staff of Gainesville High School whose competent assistance made the study possible;

ABSTRACT

Today one hears a lot of discussion about the need to link home, school, and work to assist youth in making a transition from school to work. However, there is little research which investigates how differences in relationships among the environments of home, school, and work might influence opportunities for youth development.

In hopes of contributing to needed research in this area, this study explores how an ecological perspective in human development, as conceptualized by Dr. Urie Bronfenbrenner, can be used as an analytic framework for discerning patterns of relationships among the environments of home, school, and work and resulting implications for youth development. Specifically, the study tests three hypotheses regarding how linking youth participation in the settings of home, school, school activities, community activities, work experience programs, and work may account for variations in scores on two scales measuring youths' perceptions of their communication with adults.

A total of 320 high school juniors and seniors from a comprehensive high school completed questionnaires designed to obtain measures on the variables used in an analysis model. Analysis of covariance was used to determine patterns in the way the environments of home, school, and work are linked and how they relate to more positive scores on the dependent measures. In addition, school personnel prepared in-depth descriptions of three programs which place youth in work settings as part of their education.

The information in this report represents a summary of the entire research effort. A complete report of all phases of the study, including documents such as the student questionnaire and detailed descriptions of the programs is contained in the publication entitled The Ecology of Youth Participation in Work Settings: Implications for Linking Home, School, and Work for Facilitating Communication Between Youth and Adults, Technical Report. This report is available on request at the National Center and is a part of the ERIC Reproduction Service.

INTRODUCTION

One of the most pressing concerns facing our nation today is how to prepare youth for employment. Hamilton (1980) in his review of research on work experience and employability presents five factors as being critical for people to find, hold, and work productively in jobs. These are (1) basic academic skills, (2) positive work orientation and attitudes, (3) job-related skills, (4) job search skills, and (5) work experience.

This study uses the systems approach of ecological research (Bronfenbrenner 1979) to take a close look at how relationships between environments affect two factors on this list, attitudes and work orientation. The attitudinal dimension we look at is the view youth hold of their relationships with adults in terms of their ease in communicating with adults. Communication is further broken down and studied as (1) sense of ease in talking with adults and (2) a feeling that adults are able to understand the views youth hold. For this study two kinds of work experience are analyzed: participation in a program which uses experience in work settings as a part of an educational process and holding a part-time job.

Using an ecological model we can study the functional linkages among the microsystems in which youth develop: family, peer groups, school, and community groups. Further, we can analyze experience in work settings as a separate and additional setting in order to understand how it can be effectively linked to prior experience, thus allowing work experience to serve as a developmental opportunity for youth.

Ecological research which sheds light on how to create and relate opportunities for youth to know adults can contribute to one of the nation's major problems. For, as stated in the report of the National Commission on Youth:

> Perhaps the greatest challenge facing American society is the creation of new environments for youth. These new situations must be based upon a richer mix between youth and adults.
>
> The family stands almost alone, weakly assisted by the teacher-student relationship, in suggesting a framework of communication between

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the young and the old. The relationship of
child to parent carries nearly the entire respon-
sibility for cross-age communication. This
paucity of youth/adult contacts makes the tran-
sition to adulthood a long and complex process
(Brown p. xi).

In our work as researchers in the Learning-in-Work Program
of the National Center for Research in Vocational Education, we
have come to believe that experience in work environments offers
one type of meaningful opportunity that enables youth to interact
with adults and that promotes cross-age communication. While
that opportunity may be present, our research also shows that
there is a lack of basic research on the perspectives different
youth carry with them to a work setting regarding communication
with adults and how these perspectives are reinforced, modified,
or negated through experience in work settings.

The need for such research is acute at a time when across
the nation millions of youth are in work settings as employees,
apprentices, interns, observers, or volunteers. Many choose
part-time employment for pay, or as an alternative to spending
that time at home, or at social or school activities. Further
increasing numbers of youth spend time at work as part of a
variety of programmatic efforts to give them opportunities to
prepare for employment. In these programs the employment skills
which are developed vary from specific vocational ones to work
habits and attitudes. Developing career awareness and self
confidence also falls within the range of employment-related
qualities or skills which such programs hope to impart to their
enrollees. While there are numerous evaluations of such work
programs and assessments of program participants, there is still
little understanding of how experience in a work setting can best
serve as a developmental experience by improving youths'
perspectives toward adults and their ease in communicating with
adults.

Our own observations of a number of programs which place
youth in work settings suggest the need to identify the aspects
of work experience, as well as the relationship between the
environments of home, school, and work, that support and maximize
constructive relationships with adults. For example, it appears
that prior experience with peers and adults is an important
factor in determining the youth who will seek work settings
either for employment or education, and what perspectives youth
will have of adults in general. At the same time, experience
with adults who are a part of the program (co-ordinators,
supervisors, or coworkers) enhances prior and concurrent
experience to reinforce, negate, or question prior learning.
Another observation is that some youth who select intern-type
work experiences seem to be more "adult" and may be more at

ease in work environments with older coworkers than with their peers. Similarly, youth who are ill at ease with older adults at school or at home may avoid experience in work settings predominated by older workers. These youth may be the ones who most need the type of adult interaction provided by work experience.

In the first year of this research, scales were developed to assess (1) to what extent youth perceive and use adults as a significant reference group and (2) the characteristics of youths' relationship in the work environment which may influence their perspectives. Use of adults as a reference group contained subscales labelled (1) empathy, (2) helpfulness, (3) communication, and (4) consultation. Subscales of characteristics of the work environment were (1) feedback, (2) hierarchical interaction between supervisor and employee, (3) lateral interaction with coworkers, and (4) challenge. A random sample of sophomores, juniors, and seniors attending a central high school in Oregon was selected as the study population. Youth were grouped as follows: those having no experience in work settings, those with independent part-time work experience, and those with program-related work experience (experience-based career education or cooperative education). For analysis, youth were also grouped by sex, grade level, and participation in extracurricular activities. Of the eight subscales the communication and empathy scales had the greatest reliability and capacity to discriminate among groups. While our findings showed close to significant differences for these scales, regression analysis showed that the strongest predictors of a positive score for communication and empathy were grade level and participation in extracurricular activities. This suggested some kind of natural progression of age, grade level, and extracurricular participation so that success in some settings (classroom, teams, clubs, etc.) permits success in more complicated or different settings, such as work.

PROBLEM

The products of the first year of research were scales to measure how at ease youth feel in communicating with adults and to what extent youth perceive that adults are capable of understanding their views and needs. In addition to these scales there was the recognition that in some way the place youth hold in the social structure of school, i.e., numbers of years completed, age, and participation in activities, contributes to scores on the two measures of relating to adults. Somehow (1) time in a social environment with adults, as in years of school and (2) quantity of exposure as in participation in numbers of activities with adults, appeared to relate to scores on measures of generalized attitudes toward adults.

The resulting question was whether it would be possible to create a model to predict what perspectives youth have toward adults based on prior experiences in environments in which adults are present. At the same time one would ask whether patterns of relationships between participation in environments and scores on dependent measures would be different according to other considerations in the background or experience of youth.

The search for an answer to this problem area led to ecological research in human development and in particular to the work of Dr. Bronfenbrenner. The model used in the design of the study follows.

AN ECOLOGICAL APPROACH

As presented by Dr. Bronfenbrenner (1980), ecological research requires (1) looking at environmental influences as independent variables, (2) looking at the environment in which one lives, and (3) looking at links between settings. In this study we look at the social boundaries between the subsystems (microsystems) of home, school, community, and work. Following systems theory we assume that relationships among systems and components within systems place restrictions on individuals which make the transition to new systems problematic. However, systems can be related in ways which are more or less functional in assisting persons in the transition process.

Using Dr. Bronfenbrenner's model, each setting is a micro-system.

> . . . a pattern of activities, roles and
> interpersonal relations experienced by
> the developing person in a given setting
> with particular physical and material
> characteristics (Bronfenbrenner 1979, p. 22).

We are assuming that there are adequate differences in the activities performed; the roles assumed; and the content, reciprocity, and balance of power between youth and adults in the settings of home, school, and work to treat them as different microsystems. On the same basis we made a distinction between experience in a work setting resulting from an independent search for employment and experience in a work setting related to an educational program.

In looking for how systems can be related in a functional manner to assist youth in making the transition to work environments, we selected the following propositions from Dr. Bronfenbrenner's model of an ecology of human development.

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A mesosystem comprises the interrelations
among two or more settings in which the
developing person actively participates
(Bronfenbrenner 1979, p. 25).

The developmental potential of a setting
in a mesosystem is enhanced if a person's
initial transition into that setting is
not made alone, that is, if he enters the
new setting in the company of one or more
persons with whom he has participated in
prior settings (Bronfenbrenner 1979, p. 212).

The developmental potential of a setting is
increased as a function of the number of
supportive links existing between that set-
ting and other settings (Bronfenbrenner 1979,
p. 215).

Hypotheses

In our adaptation of Dr. Bronfenbrenner's model, the
research objective was to determine how different patterns of
linking the microsystem of a work setting with other microsystems
in which youth participate contribute to youths' perception that
adults are capable of understanding their needs and to youths'
ease in communicating with adults. In addition, we hoped to
identify characteristics of the participants and their family
environments which may influence how youth will engage in and
interpret experience in work settings.

In this regard we made a slight departure from the systems
model as presented. In a systems approach, communication is
often described as an independent variable which reflects a
process occurring between levels of the system. Communication as
measured in this study is a predisposition to communicate with
adults and hence an intermediary variable in a systems model. We
use communication as a dependent variable in the analysis.

The purpose of stating the hypotheses below is to present in
advance the assumed groupings of variables and direction of
influence. The research goal includes the possible formulation
of new hypotheses suggesting more adequate explanations of human
development in work settings.

The following specific hypotheses were tested:

1. There is a significant and positive relationship
    between participation in multiple settings and the
    dependent measures, empathy and communication.

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2. There is a significant and positive relationship
    between the number of transition links between the
    microsystems of home and work, school and work, home
    and program, and school and program; and scores on
    the dependent measures, empathy and communication.

3. There is a significant and positive relationship
    between the number of support links for youth
    participating in work settings and scores on the
    dependent measures, empathy and communication.

Variables

As we asked ourselves what factors may influence how
different young people perceive and react to different
environments in which adults are present, we thought about both
characteristics of the youth and the home environment. Age, sex,
and race were defined as environmental characteristics; the
reaction or disposition such characteristics engender in the
environment creates an environmental influence. The second group
of environmental variables we selected are characteristics of the
family setting which we believe may influence how youth interpret
their experience with men and women in work settings.

For this study we treated home, school, school activities,
other activities, and work settings as different environments in
which youth form dyadic relationships with adults. The work
setting is the environment which we consider a potential develop-
mental setting for learning to communicate with adults. The
student is the developing individual within the microsystem of a
work setting. Participation in a work setting may occur as a
part-time job or as part of a school-based program which uses the
worksite for education, training, or expanding career awareness.

In an attempt to obtain a measure of the relative degree
and variety of activities in which an individual student is
involved, participation in school activities was defined as
(1) no participation, (2) some participation, and (3) a lot of
participation. We also asked students to enumerate experience in
community activities. The independent variables and the defini-
tions appear in figure 1. Figure 2 displays the items used to
obtain the score for two dependent variables, empathy and
communication.

Data Collection

In order to have a data base in which to look for patterns
of linking home, work, and school, we wanted to study a single
comprehensive high school that would meet the following criteria.

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FIGURE 1: Independent Variables

Background Characteristics

Personal Characteristics

SEX   Male or Female as indicated by respondent.

RACE   White or Minority as taken from permanent records. Minority in this case includes Blacks and Orientals.

GPA   Grade Point Average taken from permanent records; based on four point scale.

AGE   15, 16, 17, 18, and over 18 years of age as indicated by respondent.

Family Characteristics

WHO LIVE WITH   Mother; Mother and Father; Father; Guardians; Other (such as spouse or relative)

PARENT EMPLOYED   Father only is employed; Mother only; both Father and Mother; neither.

Multisetting Participation

PARTICIPATION IN SCHOOL ACTIVITIES

PARTICIPATION IN OTHER ACTIVITIES

NUMBER OF JOBS HELD

WHO YOUTH LIVE WITH

SUPPORT LINKS-3 IN WORK ENVIRONMENT

Item Number*
1. Having parents who know the employers
2. Talking about work experiences at home
3. Talking about work experiences with teachers
4. Talking about work experiences with friends
10. Having an employer visit the home
11. Having parents know a lot about school, job, employer, and program (if applicable)
12. Having parents favor participation in current job

TRANSITION LINKS-3 IN WORK ENVIRONMENT

Item Number*
5. Having school friends at the same work site
6. Having family member at work site
7. Having family member know someone at work site
8. Knowing someone personally at work site before beginning work
9. Talking with work supervisor prior to starting work

SUPPORT LINKS-4 IN PROGRAM

Item Number*
2. Parents talking with coordinators or counselors about student work experiences
3. Student and coordinator, coordinator and employer, and parents and coordinator meeting frequently
4. Coordinator visiting student's home
8. Parents/guardians feeling happy about student participation in program

TRANSITION LINKS-4 IN PROGRAM

Item Number*
1. Parents accompanying student for first discussion with coordinator about entering program
5. Student knowing program coordinator personally before entering program
6. Coordinator accompanying student on first visit to employer
7. Knowing other students in work experience program prior to entry

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* See Parts III and IV of the questionnaire for the actual questions (Appendix A).

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FIGURE 2:   Dependent Variables
Empathy and Communication Scales

Item Number*

EMPATHY*

1. Most older adults respect student opinions.
2. Older adults are too old fashioned in their ideas.
3. Older adults are not able to understand the problems of students.
4. Older adults are willing to consider students' solutions to problems.
5. Older adults don't realize that things are different today from when they were teenagers.
6. So far as ideas are concerned, students and older adults live in different worlds.
7. Older adults do understand today's students.
8. Most older adults are not willing to listen to students.
9. Older adults are out of step with the times.
10. The best way to handle older adults is to tell them what they want to hear.
11. Older adults are forever sticking their noses into things that are none of their business.
12. Older adults don't deal with problems of students very well.
13. Older adults are set in their ways.
14. Older adults are really interested in students.

COMMUNICATION

15. I feel more comfortable around older adults than around friends my age.
16. In a group of older adults, I don't say what I think because I'm afraid they may not like me.
17. Older adults are interested in the same things that interest me.
18. Most of my friends are older adults.
19. I feel free to say what I want around older adults.
20. How well do you feel you get along with older adults?
21. How comfortable do you feel talking with your guidance counselor?
22. How often do you take time to talk with one of your teachers about things which interest you?
23. How well do you feel you get along with your teachers?
24. How often do you choose to talk with older members of your family about things which interest you?

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* See part II of the questionnaire, (Appendix A).

It should offer at least three different programs that place
youth in work environments as part of their education. To build
upon the first year of the study, we wanted the programs to
include experience-based career education and cooperative
education. Second, we wanted a high school with students
representing families with low, moderate, and high incomes. We
also wanted a student population with both black and white
students in the student body and in work experience programs as
well. Another criterion was that the programs studied be
established and successful according to local criteria used to
evaluate that particular effort. The availability of school
faculty who would be interested in the kinds of questions to be
asked and willing to assist in data collection was another major
consideration.

Gainesville High School, Gainesville, Georgia, met all of
these criteria. In addition, the experience-based career edu-
cation program in the school is not only well established but has
as a program objective learning to relate to adults. Further, the
work experience programs offered--experience-based career educa-
tion, distributive education, and vocational office training--are
not targeted toward a specific group of students such as
potential dropouts.

The questionnaire was administered to all juniors and
seniors in Gainesville High School in May 1980. A total of 320
questionnaires were completed. In addition information on
student grade point average and race were taken from permanent
records. Program coordinators and a school counselor completed
lengthy questionnaires regarding the organization and operation
of vocational office training, distributive education, and
experience-based career education.

ANALYSIS AND FINDINGS

Analysis of covariance with all variables entered
simultaneously was used to test whether the variables used in a
core model of independent variables would show significant
relationships to average scores on the two dependent variables.

Analysis was sequenced in three stages to distinguish the
(1) total sample, (2) youth with experience in work settings, and
(3) youth with both program and work experience.

For the total sample the major settings in which youth
participate are home, classroom, school activities, and other
activities. Youth with work experience participate in the
additional setting of the workplace. Program students
participate in two additional settings, program and work. For

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the work experience sample, the number of jobs held and links to
work settings are additional variables. Links through the
program are added as independent variables for the last sample,
those with both work and program experience. Stages of the
analysis correspond to the parts of the questionnaire as shown in
table 1.

TABLE 1

Items Completed by Response Groups

	Questionnaire Sections			
	I Background Information	II Communication & Empathy Scales	III Work Experience	IV Program Experience
Group N				
Total 320 Sample	x	x		
Work 261 Experience	x	x	x	
Program 113 Experience	x	x	x	x

x = sections of questionnaire completed

The major findings for the two dependent variables are
summarized under the headings communication and empathy. Across
all three stages of analysis several interactions among variables
were significant and raise questions for further study. These
are presented in the section entitled Recommendations for
Research. An indepth analysis of the data along with the
questionnaires and other documentation can be found in the
technical report (Coleman and Beckman 1980).

Communication

In integrating the findings on communication for all three
groups--total sample, work experience, and program experience--it
appears that experience in a work setting and in a program made
an additive contribution to how much at ease youth feel in their
relations with adults. For youth who live with two parents at
home, work and then program experience contributed in that order
to increased scores. In the absence of participation in other
activities, experience in work settings related to higher scores
on communication.

Across all three population groups interactions involving
the variables sex, race, the persons youth live with, and parents
employed suggest that the configuration of the family influences
how youth may approach new environments and relate to them. The
significance of these patterns is discussed in the next section
of this report. The relationship of GPA and communication was
also consistent across the three population groups, with youth
having a GPA of less than 2.0 and a 3.5 or higher having the best
scores on communication. Support links formed a linear relation-
ship with more links corresponding to higher scores. With
transition links, a few links corresponded to higher scores up to
a point, then more links corresponded to lower scores.

Empathy

Overall, the model used to describe characteristics of the
ecological environment of youth did relate to scores on empathy
for all three population groups. The interactions of variables.
race, sex, and characteristics of the family environment were not
significant, as they had been with communication. GPA, however,
was related in a linear pattern with empathy for the total sample
and work experience group. Support links and transition links
were found to contribute to scores on empathy for work and
program participants.

Summary

The exploratory nature of this study requires that findings
be considered as guides for further research. The most signifi-
cant finding of the study was that there is an ecology of youth
development that does appear to be related to performance on such
measures as ease in relating to adults and perspective toward
adults. Further, the interactions suggest that different
patterns in the ecology of a youth relate to different but
perhaps predictable predispositions to new experience.

Research in the following areas would help to determine the
extent of their influence: household structure, race and sex,
school and community activities, grade point average, and support
and transition links. A brief description of the direction such
research could take follows.

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RECOMMENDATIONS FOR RESEARCH

Household Structure

Nationally there is growing concern over the impact of single-parent families on a number of facets of the development of children and youth. There is increasing awareness that youth who develop without the presence of one parent, either father or mother, encounter problems in ego identity that carry over into their own marriages. Our research suggests that whether two adults are present in the home and also which parents are employed may relate to how youth perceive and benefit from experiences with older adults in school, work, and community.

For example, our research suggests that for youth with both parents present in the home, additional experiences in work and in programs may make additional contributions to their ease in communicating with adults. The relationship among these variables is more complex in single parent households.

Further, we found that there is a significant interaction between who in the family is employed, whether a youth has work or program experience and scores on the communication scale. In this area further research on youth who live in households where the mother is the breadwinner, and probably also the only parent, and who work in contrast to those who enter programs or who stay out of work experience is warranted. The low communication scores for some youth in single parent households may indicate other circumstances which may have broad implications for the future development of these youth.

The Significance of Sex and Race

Today there is also growing concern about how to accomplish occupational equity for women. Clearly the seeds of such progress lie in helping young women develop the skills required not only for entering the labor market, but also for career advancement in roles and occupational areas not typically held by women.

An important aspect of successful negotiation of new roles in work settings is acquiring a feeling of ease in approaching older adults, seeking their advice, and contributing to discussions about work activities. Our research suggests that black females may function at a significant disadvantage in this aspect of worksite behaviors. This relative discomfort in communicating with older adults in the workplace may influence choices of careers and educational opportunities as well as performance in settings where older adults are present.

Another observation regarding the importance of sex is that males and females may be subject to different influences in family structure in terms of their communication with older adults. Young women whose mothers were employed as heads of household had the highest scores on the communication scale, while males who lived in a single parent household had the lowest. Conversely, females in households where two parents were present but only the father worked had the lowest scores. The influence of employment of parent was minimal for males.

The implications of these findings are that females, in particular black females and those from father-headed households may enter adult role settings at some disadvantage. At the same time support in overcoming or compensating for relative reluctance to communicate with older adults may be provided at little inconvenience or cost.

Further, research is suggested on the nature of the difference between males and females on communication. We further suggest study of the different approaches to remediation or compensation implied by the ecological model.

School and Community Activities

Still another area of common folk wisdom that perhaps is little understood is how participation in activities, both in school and in the community, contributes to the acquisition of knowledge, attitudes, and skills required for success in school and later adult roles.

Our research suggests that participation in school activities may differ in how that participation contributes to youths' ease in communicating with adults. Or, it may be that youth who seek out experiences in the community, especially to the exclusion of school activities, may be youth who require special attention. Another group that may warrant attention are those who do not participate in school or community activities. The matter of who seeks experiences with adults and where and how these experiences contribute to further opportunities appears to be a more complex area of investigation than previously assumed.

Grade Point Average

On a daily basis school personnel, community members, and employees make assumptions as to how youth will perform in various settings depending on their status as poor students, fair students, or good students. Often programs of certain opportunities are targeted to low-achieving or high-achieving students.

Our research suggests, however, that the relationship of grade point average to attributes associated with getting along with adults is a complex concern that requires further study. First, we observed that the attitudes and skills tapped by the empathy scale and those drawn upon by the communication scale relate consistently but differently to GPA. For empathy the commonly assumed relationship between GPA and higher scores holds true: the higher the GPA, the higher the empathy score. However, for communication, those with the highest scores are those thought of as fair students (1.5 to 2.5) and very good students (over 3.0). The average student, who is often the one not included in special programs, scores the lowest on this measure.

Since GPA is information readily available and often used as a proxy for some other variable, we believe further research is warranted to improve understanding of how it relates to both cognitive and social dimensions of youths' development.

Links

In thinking about how to study the phenomenon of participation in multiple settings, we decided to consider mesosystem links that we defined as support links and links that we called transition links. As anticipated we found that the number of support links appears additive and positive, with more links relating to higher scores in both empathy and communication. However, we found that transition links related positively to a point and then formed a negative relationship.

What our data suggest is that by planning for the social support of youth, i.e. provision of opportunities to talk about their activities and to become acquainted with the worlds in which they function--home, community, and work--it may be possible to contribute to their growth in new experiences. More research is suggested, however, to delineate how, when, and under what circumstances such attention may be most beneficial.

Implications for Policy

Any statement that individuals are different is almost a cliché. Yet social institutions do require fitting people into groups both for providing services and for evaluating programs. We suggest new concepts be devised for thinking about groups that more accurately reflect the functional relationships youth have with other significant environments in their lives. We propose that by applying an ecological framework in planning programs and evaluating their outcomes one can more adequately serve individual needs through programs targeted for groups.

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Considering the problem of youths' transition to adult roles in the light of linking environments in which youth often function offers opportunities for intervention that may ensure greater success in entering and succeeding in adult roles. The tendency is to focus on specific jobs or skills that youth may be expected to perform and to treat the individuals as if they can function in a work environment isolated from influences of other microsystems in which they function. Information regarding age, sex, and race is routinely collected for participants in government-sponsored activities. However, this information is seldom, if ever, related to data on family structure or the employment of parents for purposes of predicting attitudes, skills, and expectations youth will take with them to their new adult environments, such as work.

Research suggests that taking into account implications of the ecology does not require complicated programs and special materials or equipment. Something as simple as encouraging teaching personnel to talk with youth about their experiences outside of school provides support to youth. Having a teacher, parent, or friend accompany a youth to a new environment such as a worksite establishes a transition link. Youth who have had few experiences with older adults can be exposed to experiences with adults that will help them be more ready for experiences such as those they will face at work.

These are but a few examples of how basic and perhaps simplistic sounding are the possible applications of the findings of this study. Many more recommendations for methods of conceiving programs are suggested by the more detailed analyses of the interaction between independent variables for personal characteristics, participation in multiple settings, and transition and support links. However, additional research is recommended before evaluating the importance of the interactions suggested by our data.

Any implications for policy and decision making which may be implied by the analysis of data for this study must be stated with the warning that this study does not represent years of research across a large and comprehensive sample. With this warning and in conclusion, we offer two rather general points which we believe require consideration in the planning or evaluation of work experience programs for youth.

1. Programs may need to be planned and evaluated with consideration for certain differences among youth (1) sex, (2) race, (3) persons youth live with, (4) parent employed, and (5) prior participation in school activities.

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2. Whenever programs are designed to assist youth in making the transition to work, they should be conceptualized and planned in terms of ecological propositions.

APPENDIX A

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Student Questionnaire

We would like to ask your help in a study to learn more about high school students' experiences with older adults and work. Your participation in this study is voluntary. Your answers to these questions will be anonymous.

We would like your signature to indicate that you understand the purpose of the study and that you volunteer to participate.

Thank you.

Name _____

Date _____

The National Center for Research in Vocational Education

1980

LEARNING IN WORK

PART I

The following questions are to help us gather some background information. Please place an "X" in the box next to the appropriate answer.

1. Age: ☐15 ☐16 ☐17 ☐18 ☐Over 18

2. Grade: ☐11 ☐12

3. Sex: ☐Male ☐Female

4. Who do you live with most of the time?
   ☐Mother (or female guardian) ☐Father (or male guardian)
   ☐Mother and Father (or guardians) ☐Other/define: _____

5. Do one or both or your parents work outside the home?
   ☐Yes, Father ☐Yes, Mother ☐No, Father ☐No, Mother

6. Do you participate in extracurricular activities related to school?
   ☐No ☐Yes, some ☐Yes, a lot

7. Activities in which I have been an active member, either in the past or currently are: (Please place an "X" by each one in which you have been active)
   ☐Scouting ☐Music groups ☐Church groups ☐Team sports
   ☐Volunteer ☐Others: 1: _____ ☐None
   work 2. _____

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PART 11

The following questions ask your views on adults who are twenty years old or more. There are no right or wrong answers.

DIRECTIONS: Read each statement carefully and decide how you feel about it. Please *circle:*

SA = if you Strongly Agree with the statement.
A = if on the whole you Agree.
U = if you cannot make up your mind or don't understand the statement.
D = if on the whole you Disagree.
SD = if you Strongly Disagree with the statement.

Definition: Older Adult—a person who is over 20 years old.

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	Most older adults respect student opinions	SA	A	U	D	SD
2.	Older adults are too old fashioned in their ideas	SA	A	U	D	SD
3.	Older adults are not able to understand the problems of students	SA	A	U	D	SD
4.	Older adults are willing to consider students' solutions to problems	SA	A	U	D	SD
5.	Older adults don't realize that things are different today from when they were teenagers	SA	A	U	D	SD
6.	So far as ideas are concerned, students and older adults live in different worlds	SA	A	U	D	SD
7.	Older adults do understand today's students	SA	A	U	D	SD
8.	Most older adults are not willing to listen to students	SA	A	U	D	SD
9.	Older adults are out of step with the times	SA	A	U	D	SD
10.	The best way to handle older adults is to tell them what they want to hear	SA	A	U	D	SD
11.	Older adults are forever sticking their noses into things that are none of their business	SA	A	U	D	SD
12.	Older adults don't deal with problems of students very well	SA	A	U	D	SD
13.	Older adults are set in their ways	SA	A	U	D	SD
14.	Older adults are really interested in students	SA	A	U	D	SD
15.	I feel more comfortable around older adults than around friends my age	SA	A	U	D	SD
16.	In a group of older adults, I don't say what I think because I'm afraid they may not like me	SA	A	U	D	SD
17.	Older adults are interested in the same things that interest me	SA	A	U	D	SD
18.	Most of my friends are older adults	SA	A	U	D	SD
19.	I feel free to say what I want around older adults	SA	A	U	D	SD

Please read each question, decide how you feel about it and check the answer that is most true for you.

20. How well do you feel you get along with older adults?
☐ Very well ☐ Fairly well ☐ Not very well

21. How comfortable do you feel talking with your guidance counselor?
☐ Very comfortable ☐ Fairly comfortable ☐ A little uncomfortable ☐ Not very comfortable

22. How often do you take time to talk with one of your teachers about things which interest you?
☐ Regularly ☐ Once in a while ☐ Seldom or never

23. How well do you feel you get along with your teachers?
☐ Very Well ☐ Fairly Well ☐ Poorly

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24. How often do you choose to talk with older members of your family about things which interest you?
☐Often   ☐Once in a while   ☐Seldom

25. Have you held a job for which you were paid for three months or more?
☐No   ☐Yes

26. Have you ever been enrolled in a work experience program for three months or more?
☐No   ☐Yes   ☐Which one?_____

27. Do you leave school before the end of the school day in order to go to work?
☐No   ☐Yes

IF YOU HAVE NOT HELD A PAYING JOB OR BEEN IN A WORK EXPERIENCE PROGRAM FOR THREE MONTHS OR MORE OR IF YOU ARE NOT IN A WORK EXPERIENCE PROGRAM PLEASE STOP NOW. THANK YOU.

IF YOU HAVE HELD A PAYING JOB FOR THREE MONTHS OR MORE OR IF YOU HAVE BEEN IN A WORK EXPERIENCE PROGRAM, PLEASE CONTINUE.

PART III

The following questions are about your relationship with the workplace. Please place an "X" by the appropriate answer.

1. Does your parent(s) know your employer?
☐No   ☐Yes

2. Do you talk about work experiences at home?
☐Never   ☐Sometimes   ☐A lot

3. Do you talk about work experiences with your teachers?
☐Never   ☐Sometimes   ☐A lot

4. Do you talk about work with your friends at school?
☐Never   ☐Sometimes   ☐A lot

5. Are any of your school friends at the same work site?
☐No   ☐Yes

6. Does any one in your family work where you work?
☐No   ☐Yes

7. Did any of your family know (personally) anybody who works at the same place you do before you started to work there?
☐No   ☐Yes

8. Did you know (personally) anybody who works at the same place you do before you started work there?
☐No   ☐Yes

9. Did you talk with your work supervisor prior to your starting work?
☐No   ☐Yes

10. Has your employer ever visited your home?
☐No   ☐Yes   ☐Don't know

11. Do you parents know a lot about:
the school   ☐No   ☐Yes
the job you have   ☐No   ☐Yes
your employer   ☐No   ☐Yes   ☐Does not apply
the program you're in   ☐No   ☐Yes   ☐Does not apply

12. How do your parents/guardians feel about your current job?
☐are in favor of it   ☐Not sure how they feel   ☐don't think they are in favor of it

13. How many different jobs have you held? _____

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14. Most of the people I work closely with (my co-workers) are:
    A. ___ Older than I am   ___ About the same age as I am   Younger than I am
    B. ___ Mostly men   ___ About half are men and half are women   Most are women
    C. ___ Supervisors   ___ Supervisors and co-workers   Co workers only

15. Has experience in work settings changed the way you view older adults?
      ☐ Yes   ☐ No
    Please explain why or why not:

IF YOU HAVE NOT BEEN ENROLLED IN A WORK EXPERIENCE PROGRAM FOR THREE MONTHS PLEASE STOP. IF YOU HAVE BEEN ENROLLED IN A WORK EXPERIENCE PROGRAM FOR THREE MONTHS, PLEASE CONTINUE. THANK YOU.

PART IV

The following questions are about your relationship with your work experience program. There are no right or wrong answers. Please place an "X" by the appropriate answer.

1. Did one or both parents come with you the first time you spoke to the counselor/co-ordinator about participating in a work experience program?
     ☐ No   ☐ Yes

2. Do(es) your parents talk with your coordinators or counselors about your experiences at work?
     ☐ No   ☐ Yes

3. How often do the following groups of people meet together?

	Almost every day	Frequently	Seldom	Almost never
You and your coordinator	☐	☐	☐	☐
Your coordinator and your employer	☐	☐	☐	☐
You and your parents and coordinator	☐	☐	☐	☐

4. Has your coordinator ever visited your home?
     ☐ No   ☐ Yes

5. Did you know your coordinator (personally) before you entered the program?
     ☐ No   ☐ Yes

6. Did your coordinator go with you the first time you went to the job site to visit your employer?
     ☐ No   ☐ Yes

7. Did you know any other students in your work experience program your first day in the program?
     ☐ No   ☐ Yes

8. How do your parents/guardians feel about your participation in this program?
     ☐ Happy about it   ☐ Uncertain how they feel   ☐ Unhappy about it
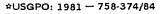
Thank you for your participation.

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