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ABSTRACT
                 In March and May 2002, two workshops on adolescent literacy,
co-sponsored by several federal agencies and professional associations, were
held. They included presentations, discussion panels, audience questions and
comments, and small working groups. The overall goal of both workshops was to
assess the current state of knowledge on adolescent literacy, to develop
recommendations for research, and to articulate research questions that need
to be addressed to move the field of adolescent literacy forward. This paper
reflects the deliberations of the researchers, practitioners, administrators,
funders, and policy-makers attending the workshops. The workshops included
presentations that surveyed current research in adolescent literacy and
identified gaps and areas in need of research. The two workshops made clear
that much research is needed in this under-studied area. Long-term
longitudinal and descriptive studies are needed that trace and define the
developmental trajectory of reading and writing in the adolescent period.
Cross-sectional studies may be used to distinguish skill level of students in
different grades. Case studies may assist in formulating theories that may
elucidate the findings from longitudinal and/or cross-sectional studies. In
addition, experimental and quasi-experimental studies of instructional
methods, models for effective reading instruction delivery in middle and high
school, and specific interventions for struggling readers are needed. The
most informative research will link various fields and disciplines, sharing
methods and approaches and bringing multiple perspectives to bear on these
important questions. This paper also suggests relevant research issues. (NKA)

ED 475 854

Adolescent Literacy: Research Needs.

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ERIC

THE PARTNERSHIP FOR READING

BRINGING SCIENTIFIC EVIDENCE TO LEARNING

Adolescent Literacy—Research Informing Practice: A Series of Workshops

Adolescent Literacy:
Research Needs

Despite the significant advances that have been made in our understanding of the abilities children must acquire to become successful readers and the conditions under which the necessary skills are most effectively taught, very little converging evidence addresses how adolescents learn and how best to teach literacy-reading and writing-to middle and high school students. We need to know the extent to which our current evidence about early reading and reading instruction holds true for older students who fail to acquire the basic foundational skills for literacy. Why does it seem that learning to read is more difficult after age 9? How can we best intervene to improve reading after that age? Which specific abilities and characteristics of learners are most predictive of successful reading and of reading difficulties in adolescents? How do we motivate middle and high school students who have experienced failure in literacy to re-engage in this all-important learning task?

In March and May 2002, two workshops on Adolescent Literacy were held. These workshops were co-sponsored by several federal agencies and professional associations, and brought together researchers, practitioners, administrators, funders and policy-makers. They included presentations, discussion panels, audience questions and comments, and small working groups. The overall goal of both workshops was to assess the current state of knowledge on adolescent literacy, to develop recommendations for research, and to articulate research questions that need to be addressed in order to move the field of adolescent literacy forward. This document reflects their deliberations.

The workshops included presentations that surveyed current research in adolescent literacy and identified gaps and areas in need of research. In the second workshop, examples of instructional models being implemented in middle and high schools were presented, highlighting the importance of the development, implementation and evaluation of such models, and the value of rigorous design in evaluation.

The two workshops made clear that much research is needed in this under-studied area. Long-term longitudinal and descriptive studies are needed that trace and define the developmental trajectory of reading and writing in the adolescent period. Cross-sectional studies may be used to distinguish skill level of students in different grades. Case studies may assist in formulating theories that may elucidate the findings from longitudinal and/or cross-sectional studies. In addition, experimental and quasi-experimental studies of instructional methods, models for effective reading instruction delivery in middle and high school, and specific interventions for struggling readers are needed. Data-mining may help to circumvent lengthy time frames on longitudinal studies, by learning what we can from extant datasets and using this information in the design of longitudinal studies that could thus possibly move more quickly to answer crucial research questions. Studies that link behavior and the neurobiological aspects of reading in this age group are needed, and there is a need for novel uses of designs and methods and for the development of innovative ways to study this challenging group of students. The most informative research will link various fields and disciplines, sharing methods and approaches and bringing multiple perspectives to bear on these important questions. Researchers must study students who reflect the demography of the school, district, state, or nation, and

interventions must be tested with diverse groups.

Concepts

The focus on adolescent literacy raises the question of what is meant by "adolescent" and by "literacy." For purposes of research, a consensus definition and consistent use of the concept of "adolescence" are needed. In these workshops, adolescence was defined as the middle and high school period. Clearly investigators should give specific definitions of adolescence as operationalized in their research. The concept of literacy generally includes reading and writing, and the interaction between the two is crucial in studying the development of literacy in adolescence. It is important to note that this includes computer and multimedia literacy, since adolescents, like many other age groups today, may use the computer and multimedia (e.g. CD-ROMs) for a great deal of their reading and writing.

Key to understanding adolescence are the characteristics of the preadolescent period and how those affect adolescence. A developmental description of adolescence and of adolescents' literacy needs relative to their personal characteristics is fundamental to conducting research on adolescent literacy and can be seen as a research topic itself. During formal schooling in the U.S., there are two significant transitions-that from elementary school to middle school and that from middle school to high school. Ideally reading difficulties would be prevented before children must negotiate these transitions. There is a need for studies that design, implement and test the effectiveness of preventive interventions in the pre-adolescent period (i.e. the latter half of the elementary school years). Meanwhile, there are currently many children/adolescents for whom intervention during the middle school and high school years is needed. We need to better understand how these transitions alter the characteristics of the individual, the problem of reading difficulties and its sequelae, and possible solutions.

Likewise, literacy is best characterized as a developmental process, and research is needed to describe that process through the adolescent years. While there is a need for the design, development and testing of interventions, there is also a basic need to understand the continued learning and development that takes place during adolescence in the areas of reading and writing. The concept of literacy development is complex because it is intertwined and interactive with the context in which learning occurs. In addition, literacy abilities vary widely across segments of the population, such as English-language learners, average and high achievers, minority students, students with disabilities, and students living in rural vs. urban areas.

The Extent of the Problem

Research is needed to provide additional and more detailed data on the extent of the problem. We know that there are adolescents who have difficulties reading and writing. We need to know which population groups are most affected, their sociodemographic characteristics, the geographical distribution, and how many adolescents have persisting difficulties and how many have emerging problems. We also need detailed characterizations of struggling readers and of students who are performing well, in order to best design optimal programs for all students and optimal tailored interventions for those with difficulties. Any such characterizations must also take contextual and environmental factors into account.

Adolescent Literacy - The Development of Literacy in Middle and High School

Development is taken as a superordinate principle in organizing this research agenda. We need to define the typical developmental process, and collect data on how many students are performing in a manner inconsistent with it, and what is necessary to alter the process to provide for more normative

progress in the future for these students. Research is needed to investigate the connections among several basic dynamic domains or themes that affect the development of adolescent literacy.

- Abilities and characteristics of the students
- Context and environment
- Outcomes of interest
- Characteristics of teachers, practices and programs
- Professional development

Across all of these domains are three integrated elements:

- Assessment: how to measure what is being observed (includes direct observation, self-report, and direct testing of groups and individuals),
- Intervention for creating the outcomes, where intervention might be individual remediation, classroom instruction, or restructuring of school programs, and
- Sociocultural issues (including language/dialect and the culture of the school and the community).

Two complex overarching questions must be addressed:

1. What are the characteristics of students, their environments, the context in which they receive instruction, and the nature of that instruction with regard to reading and writing during adolescence? At different developmental levels of literacy? What are the interactions, the reciprocal relationships, among these factors?
2. How do the characteristics of students, their environments, the contexts in which they receive instruction, and the nature of that instruction with regard to reading and writing during adolescence change and develop over the course of adolescence? This is not a passive model of change. How do adolescents navigate and work through the transitions into and from one level to the next within adolescence? What resources do they access, what literacy practices do they engage in on their own, and what factors affect, mediate, or moderate change?

Relevant Research Issues

Abilities and characteristics of students
In describing learners, researchers should take several factors into consideration. First, cognition, knowledge, and executive function (self-regulation, metacognition) must be measured and characterized over time, and should be considered in designing interventions, as should sociocultural characteristics. Similarly, research should describe language and communication characteristics, psychosocial factors (such as identity and motivation), and sociocultural factors (such as socioeconomic status, culture, and English as a second language). In addition, because learning can be constrained by neurobiological factors, it will be important to study the neurobiological aspects of the learning process as adolescents advance their reading and writing skills. Research samples and individuals should be sufficiently well-characterized that studies can be replicated, and data understood within the broader context of related research, as well as allow answers to questions concerning what was learned, who learned it and who did not, and under which conditions does such learning take place for these students.

- To what extent does oral language proficiency affect a student's ability to learn to read and write? This is important to examine for all students, but should also be studied in depth for English language learning students. How do these relations differ for adolescent students and students in earlier grades?

- Research on literacy development for English- language learners is critical. Consideration must be given to the level of oral proficiency - beginning, intermediate, advanced - and to current literacy levels - from non-reader to proficient reader in the first and second languages.

- What is the role of motivation in learning to read and write? How does one instill a sense of confidence and an attitude of self-efficacy in the adolescent reader? Does the content of the reading material contribute to the motivation level of the adolescent? How do the text structures and readability level contribute to motivation? Is there a correlation between interest, reading performance, and reading comprehension? Good readers do not necessarily read for pleasure. To achieve something, it is not always necessary to enjoy doing it, but there should be a value to the student in the accomplishment. When one achieves, there often is an increase in intrinsic motivation. Better self-report measures and other kinds of measures (e.g., teacher ratings, observations) are needed to assess motivation.

- Motivation is multifaceted and includes self-efficacy, interest, and goals for reading. What is the relationship between "liking" to read and the "effort" expended by the adolescent reader and the eventual "payoff"? What is the relationship between student perception of the importance of reading and writing to student performance? How does motivation differ for students in different cultures? What are the different motivating factors that must be recognized and taken into account in attempting to measure literacy skills and develop interventions for linguistically and/or culturally different groups of students?

- What is the role of background knowledge? How and to what extent does background knowledge limit the adolescent student's reading performance, and what are the most effective and efficient remediation approaches? How does background knowledge differ for students from different cultural or ethnic groups?

- To what extent is student interest in the reading material related to (a) an increase in the amount of reading students engage in and (b) improvement in measured performance in different components of reading (e.g., decoding, vocabulary, comprehension)? How can student interest be used effectively as part of instructional practice? To what extent do motivation and background knowledge affect student interest in reading material, and is this amenable to intervention?

Context and Environment
The school context in general can affect motivation and learning, as well as how instruction and intervention are provided. The context in which students are learning must be considered. Research should examine the context in which adolescents are functioning, and what should be changed in those contexts to help students read better.

The school as a learning environment should be studied and factored into research on adolescent literacy. Environment might include middle and high school environments, the characteristics of each, the differences between them, the demands of the middle school and high school learning environments, the effects these have on student learning and motivation, and their implications for instruction as well as for teacher preparation and professional development.

Other environmental factors must also be taken into account, such as home, after-school activities, peer groups, the neighborhood, and community. The language spoken in all of these locales is also a crucial part of the learning environment, and must be considered, as well as the cultural differences that may exist within schools and communities.

- How do schools where large numbers of students achieve high levels of literacy differ both structurally and functionally from those where students do not perform as well? Are there effects of school or program design or structure on literacy development? Specifically, is there a fit between school characteristics and differences in adolescent literacy ability levels and motivation for reading and writing?

- How do the literacy values of the classroom and school affect student literacy outcomes? How do literacy values relate to subject matter values for teachers and students, and how do these sets of values and their relations affect student literacy outcomes?

- What is the role of classroom composition in affecting student literacy outcomes in middle and high school? To what extent does instructional group size and composition impact learning?

- Membership in structured groups is very important in society. Because an adolescent's values and position on education may be strongly influenced by his or her peer social group, the values of the group can be key to a student's development. Thus, research should be done on adolescent social groups, both inside and outside of school as they relate to adolescents' literacy development and outcomes. Research is needed to examine the role of social groups in motivating or affecting a student's commitment to learning to read and write, and can provide insights into the design and implementation of effective interventions. Cultural differences must be taken into account in any such research. In addition, this research should include students' affect and what the teacher and social group are seeking in terms of affective response, and how these relate to adolescents' literacy development and outcomes.

- Identifying the broader context of sociocultural factors that influence adolescent literacy is important in determining how best to motivate adolescents in mastering the abilities and skills necessary for literacy, and in enabling teachers and other professionals to teach or intervene effectively. These factors also play a crucial role in developing both clinical and research measures to assess students' abilities, in order to identify their areas of weakness or difficulty.

Outcomes of Interest
Literacy is a broad concept, but it may be operationally defined in research as the ability of the learner to perform reading and writing tasks. Outcomes of interest in adolescent literacy may well include all of the same areas as for younger children, but the level of complexity of the material and the expertise that will constitute success for adolescents differs.

- There is a strong suggestion that by adolescence the roles of various components are not the same as in beginning reading. Grades 4 and 5 are a period of transition. What are the characteristics (the profile) of adolescent readers with different levels of skill? And how do these characteristics change over time, within the various components of literacy?

- What roles do the core components of reading (phonology, fluency, vocabulary, and background)) play in affecting students' comprehension and appreciation for written communication? Research is needed to define and describe the developmental aspects of the core reading components and outcomes for adolescents and how they interact within the context of the types of text that students encounter, such as newspapers, textbooks, or texts in the work environment.

- One especially important aspect of literacy during adolescence is comprehension, which lies at the heart of understanding written communication and the development of meaningful interpretations. Comprehension involves linguistic processing, communication, interpretation, integration, and inference. In both comprehension and written expression, literacy tasks are intertwined with multiple and incremental levels of basic language knowledge. These levels

include:
- Word level: phonological, orthographic, morphemic, and semantic
- Sentence level: literal and idiomatic syntactic understanding and formulation
- Discourse level: text level comprehension, prior knowledge, inference, and discourse
- Application level: knowledge integration and modification - not only what is understood but also how it modifies adolescents' behavior and decisions.

Research is needed to document the relationships among these levels and how they interact in the ongoing development of reading and writing ability in adolescents.

- Research on reading comprehension should elucidate the relation between reading processing and comprehension and how reading comprehension differs in process and strategy from listening comprehension. How do alternative modes of input and output affect comprehension/ composition of text? What strategies are effective for improving adolescents' comprehension of text, and their written expression? What are the contexts across which specific strategies generalize, and which strategies do not generalize well? What strategies should adolescents be taught, and why? Under what contexts should adolescents be taught to use specific strategies, and what can adolescents and their teachers expect will result from such instruction? How do students best learn strategies for reading comprehension, and what factors influence when, whether, and how well they implement those strategies?

- How are comprehension strategies manifested in reading in content areas? Are there core strategies that could be used across types of text that would facilitate comprehension? How are these best taught or developed in students?

- The connection between reading and writing must be elucidated in order to be applied more systematically and strategically in instruction and interventions for struggling readers. The role of oral language (listening and speaking) as they interact with reading and writing should also be investigated. What are the links between oral language knowledge/skills and literacy along the oral-literate continuum?

Characteristics of practices and programs

The foundational information that descriptive research will provide on the developmental changes that occur as adolescents learn to read and write and to acquire these skills at increasingly complex levels will become the basis for identifying the specific intervention needs of struggling adolescent readers and writers, and for the design and implementation of interventions. As for all other age groups, it is crucial to determine the most appropriate and effective interventions for adolescents. Intervention research must answer the question of which interventions are most effective, for which students, under which conditions. In determining "for which students," it will be important to consider students' linguistic and cultural differences in the design, implementation, and assessment of interventions' effectiveness. These interventions are no less important than interventions for any other age group, and are possibly even more complex for adolescents who are experiencing peer pressure and neurobiologic changes, and whose motivation and self-image may have already suffered from failure to achieve mastery in literacy. There is also a need to more fully understand and address the literacy instruction and intervention needs of students with various types of disabilities, both learning disabilities (reading and other learning areas) and other disabilities (including those with significant cognitive, motor, or communication needs) that can interfere with the process of developing reading and writing abilities.

Issues of scalability and sustainability should be considered when instructions/interventions are conceptualized. That is, we need to design interventions that inherently contain the attributes that would facilitate their being taken to scale. Much of what researchers develop may be highly effective

in a research setting but too cumbersome or difficult to implement in the real world. If our intent is to have all students taught with scientifically based instruction, then it is imperative that our instructional and intervention practices be in a form that can be brought to scale. One such bringing to scale, for classroom instruction, may be through the development of instructional models or curricula, such as those presented at the second Adolescent Literacy workshop. Data should be gathered that includes careful sample characterization so that we can learn which models work better for which students, classrooms or schools.

In order to best understand the setting and conditions under which students learn, researchers must be in the schools and classrooms. The input of teachers who interact with these students on a daily basis can provide information to help inform the design, implementation, and ultimate success of research efforts. The development of strong cooperative relationships with teachers and education administrators is important to foundation research conducted in schools, as well as to the scaling up of instructional and intervention research in schools.

Important questions to answer regarding instruction and intervention that were raised at the workshops include the following:

- How well does research on younger learners apply to adolescents? How much of what we know about effective instruction and intervention can be used in developing and testing instruction and interventions for middle or high school students?

- What interventions and practices are currently used, and how are they related to achievement? To what extent do these interventions affect student motivation, and to what extent are the effects on achievement mediated or moderated by effects on motivation? What are the instructional and environmental characteristics of classrooms in which all students have productive, manageable, and meaningful reading and writing experiences?

- What structural elements (e.g., scheduling, grouping configurations, level of teacher support) in middle and high school support successful implementation of reading and writing strategies?

- What does theory posit about areas to target in intervention and instruction for fluency, comprehension, writing, and/or spelling? Is there a critical period for learning to read, spell, etc.?

- How do teachers' assessments of and instructional decisions about individual students influence the literacy development of individual students?

- There is a direct interaction between writing and reading and derivational, morphological knowledge in spelling. How should instruction and intervention techniques for literacy address both writing and reading? What is the role of text format, rhetorical characteristics, and derivational morphology in developing literacy?

- How can the research-based information on teachers and instruction be transferred to classroom practice and the development of new materials? How can instructional practices that have been shown to be effective for certain groups be scaled up for use with larger and more diverse groups of students? What are the conditions under which such scale-up can be implemented without losing fidelity such that the effectiveness of the instructional methods is not compromised?

- What should be in an intervention plan? From a theoretical understanding of student needs,

what interventions will be most effective for which learners? Are different intervention strategies needed for particular subgroups, especially students who are English-language learners and those with a range of disabilities?

- How is reading textbooks similar to and different from reading other texts? Are there alternatives to textbooks? Are there alternatives to having all students reading the same text? How do teachers use different types of text to supplement their teaching strategies? What types of support do teachers need to be effective in using a diversity of texts in their classrooms? How accessible is text to special populations where accommodations are needed?

- How do teachers and students use text and how do they communicate teacher-to-student and student-to-teacher about text? To what extent and how do students communicate with one another about texts, and to what extent do these communications affect students motivation to engage in literacy, and affect literacy outcomes? How can texts be better designed to facilitate the development of higher level literacy abilities? What are the optimal text and/or document characteristics for different content areas? Is there a set of core text characteristics that is common across content areas? How can we optimize the interaction between instructional approach and text characteristics, and what types of training would best prepare teachers to effectively implement instruction with different types of text/documents?

- Computers and multimedia technology play an important role in adolescent literacy. Most adolescents will do a great deal of their writing and reading on computers, and will read a large amount of text in multimedia format. Characterizing the technological learning environment and its utility in motivating, instructing, assessing, and intervening with adolescent readers and writers is an important research aim. What is the role of technology in reading and writing? How can technology tools be used to mirror and support literacy instruction? How are technology tools effectively integrated into the literacy curriculum? Which tools are best suited to different subgroups of adolescent learners? Which tools assist students in self-regulating reading and writing processes at the appropriate times and at the appropriate levels? How do computer-based factors such as ease of use, learnability, physical access, and appeal impact the literacy learning experience for various subgroups of students? How can these tools be used to facilitate the reading and writing connection?

Teacher Preparation and professional development

The development of a science of instruction is crucial to adolescents' success in developing literacy. The content, design, implementation, and effectiveness of teacher pre-service education and in-service continuing education have not been adequately researched. The development of the teacher over time has not been rigorously examined, and it is generally the case that high school content teachers receive little or no training in how to teach literacy. It is not clear how or how often pre-service education incorporates the findings from current research. Research is needed that follows teachers in classrooms, assesses student outcomes, relates these to teachers' background, and provides a profile of teachers and their needs.

- What are the most important components of teacher preparation? To the extent that these are known, to what extent are they part of programs of teacher preparation or professional development for middle or high school teachers? What do prospective and current teachers need to know and be able to do to deliver effective, high-quality literacy instruction to adolescents? (For example, to be successful, does a teacher need to know about learner characteristics and learning environments?) What is the role of the university in professional development in creating a continuum of instruction for teachers?

- How do teachers learn new strategies? For how long after an initial gain or change in instructional behavior do teachers maintain that behavior? (There is preliminary evidence that

if teachers change their behavior, student outcomes improve, but if the teachers revert to old teaching habits, student performance declines. Replication and more in-depth investigation are needed on these findings.)

- How can different approaches and supports to secondary teacher planning and decision making related to promoting literacy across the secondary curriculum increase adolescent learning for all students?

- What is the role of professional development for reading instruction across disciplines? How can literacy instruction be effectively integrated into the teaching of content, and what are the characteristics of exemplary teachers of content area literacy? (Middle school teachers tend to be developmentally oriented while high school subject area teachers tend not to go beyond the content.) How can content teachers accommodate the wide range of cultural and knowledge abilities of the individual students (including both subject area and methods)?

- More discourse is needed between researchers and practitioners. Do students have specific literacy instructional needs within content areas? How does the presentation of knowledge differ across content areas, such as math or history? Are there specific differences that might help to inform both instruction and intervention? What effects do teacher inquiry and decision making have on student engagement and achievement?

- Should some aspects of reading and writing be taught by content area teachers, and if so how should those teachers be prepared? What is needed in professional development and how can that best be delivered? What combination of professional development opportunities is most effective?

- How can secondary teachers' values and beliefs about their instructional role, student learning, student literacy, and the adolescent experience be aligned in ways that support positive literacy learning for their students?

- What are the characteristics of exemplary teachers? How do they support literacy in their classrooms? What are they doing? How can other teachers be motivated to do what these effective teachers are doing? Which students are the exemplary teachers helping?

- What training is required for teachers depends not only on what students are being taught but also on who the students are. What do teachers need to know and be able to do to successfully teach literacy when English is not the native language of the student, and/or when many languages are represented within the classroom, and which teachers might most benefit from training in English as a Second Language (ESL) or other specific instructional approaches?

- What are the optimal methods of teaching literacy to students whose first language is not English? What techniques are effective with a group of students whose first language is the same (e.g. Spanish) and what techniques are effective with a group of English language learning students who have different first languages? Is it more effective to teach struggling adolescent readers to read in their native language first and then to transition them to English? How do adolescent English language learners access/acquire literacy in the content areas? How do we teach students who are both limited in their English proficiency and have learning disabilities?

In addition to describing teachers and their full preparation, research should also describe the role, background, and information needs of others involved in helping adolescents become literate (e.g.,

speech language pathologists, community workers, parents).

- How do others involved in literacy education develop the necessary knowledge and skills to support effective literacy in adolescent and pre-adolescent students? What knowledge is necessary for each group?

Assessment Methods and Measures

In addition to asking appropriate questions and applying appropriate research design and methods, researchers must have instruments for assessing the constructs under study that will lead to valid and reliable inferences. Reading and writing are developmental processes and assessment methods are needed to find out how children are progressing along the continuum. Workshop participants suggested the need for many different types of measures. However, any research agenda in assessment must examine the extent to which it is actually necessary to use different kinds of assessments. What do we learn from one that we do not learn from another? To what extent do results generalize from one kind of assessment to another with respect to adolescent literacy development? Whether in fact all these different types of measures are needed, and would serve useful purposes, are empirical questions that merit investigation, and good theory about the cognitive processes involved in different approaches to assessment and assessments using different kinds of text will help us to develop theories about generalizability as it relates to the assessment of literacy in adolescents.

With this in mind, the following are the major points raised by workshop participants regarding assessment are presented for consideration:

- Participants in the workshop made the points that psychometric assessments of student performance are needed, including criterion referenced measures. Students and teachers need feedback about how well students are doing so that teachers can change instructional methods to meet student learning needs. Spelling and reading comprehension present special challenges because of the complexity of the behaviors of interest, the different values that various constituencies place on different aspects of assessment, and the lack of consensus around how best to measure these behaviors.

- Participants also stated that assessment methods should be sensitive to increasing and changing abilities and needs, and special consideration must be given to appropriate measures for English-language learners and other subgroups. Moreover, assessment should include a range of language literacy abilities, including narrative and expository knowledge, comprehension, decoding, and inferencing. Timed measures (speed of response) reveal many differences among groups of readers. There are also different pathways in language development. Studies are needed to clarify the nature of the interconnections among knowledge about language, e.g., syntax, vocabulary, morphology, and reading skill; in order to examine these issues, measures of each of these areas, with good psychometric properties, must be identified or developed. The role and nature of advanced oral language measures should also be examined. In addition, we must explore the best ways of measuring literacy achievement in adolescents, especially achievement and motivation, for the separable purposes of (1) identifying students' needs, (2) informing classroom instruction and informally monitoring student progress, and (3) evaluating the progress and success of intervention efforts. It is important to identify strengths as well as deficits.

- Valid assessment is a challenge with adolescents who may be reluctant respondents in an assessment situation. How can student motivation to demonstrate actual performance on assessment measures be addressed? Further, how can adolescent motivation be assessed in new, fine-grained ways so that motivational differences can be considered in identifying and

treating adolescent literacy problems and in enhancing literacy progress for all students?

- Comprehension is a complex construct. There is a need for measures that tap that complexity. Separate measures of vocabulary and text comprehension are crucial, and there is a need for comprehension measures that have external validity, for example, in the classroom experience. The mechanism for navigating text and comprehending a passage is complex; searching for information and summarizing text are examples of comprehension strategies. We need measures that will enable us to study the relationship between reading processing and comprehension, and how reading comprehension differs in process and strategy from listening comprehension. Workshop participants also voiced a practical need for comprehension assessment that includes measures of those abilities that students need to use in the world outside the classroom. A few examples include the use of schedules, maps, manuals, and business correspondence.

- Can instruction be measured? What are the characteristics of exemplary instruction? Can they be quantified or characterized in a way that allows them to be taught as part of teacher preparation or professional development? If we are to develop a science of instruction, such measures will be imperative.

- Workshop participants noted a need for psychometrically sound measures to assess native language literacy of older English-language learners. In addition, they noted that the alignment of instruction and assessment with the needs of diverse learners has been understudied. While some work has begun on English language learners, most of this is not addressing adolescent learners. Even where such measures do exist, translation of these is unlikely to be the solution to their use with non-English-speaking or English language learning students, and translation cannot address dialect or other sociocultural factors.

- Workshop participants voiced the need for assessments outside of the testing situation, that measure reading proficiency across different text types (including electronic text) and writing, for tools and techniques that will enable teachers to gather valid information in the classroom, and for methods that will assist them in efficiently using this information to alter and individualize instruction in a timely way.

<u>Adolescent Literacy Home</u>

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