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ABSTRACT
                The purpose of the Profiling System is to provide diagnostic
and instructional resources to regular and special education teachers. The
Profiling System is based on research and literature in psychological type
and learning style. It combines the literature in these areas with academic
and perceptual assessment instruments to screen for learning difficulties in
elementary-age children. The results of these assessments are then used to
suggest teaching strategies and interventions in the forms of remediations,
modifications, and accommodations. The Profiling System is intended to help
teachers in preparing learning objectives that are a better match to the
student's ability level and learning preferences. This paper reviews the
Profiling System's relevance, structure, and content. The System was created
to account for individual differences in learning and to identify learner
preferences to modified and diversified instructional delivery. To refine the
Profiling System, it will be used with at least 20 teachers in the Houston
(Texas) area for 3 consecutive grading periods. An appendix contains versions
of the Profiling System. (Contains 27 references.) (Author/SLD)

PROFILING SYSTEM/ USING PSYCHOLOGICAL TYPE AND LEARNING STYLE TO PROVIDE ADAPTATIONS FOR TEACHING

The Profiling System/Using Psychological Type and Learning Style to provide adaptations for

teaching methodology in the Regular and Special Education classroom

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Abstract

The purpose of the Profiling System is to provide diagnostic and instructional resources to Regular and Special Education teachers. The Profiling System is based upon research and literature in psychological type and learning style. It combines the literature in these areas with academic, and perceptual assessment instruments to screen for learning difficulties in elementary age children. The results of these assessments are then used to suggest teaching strategies and interventions, in the forms of remediations, modifications, and accommodations. The Profiling System is intended to help teachers in preparing learning objectives to better match the student's ability level and learning preferences. The following paper reviews the Profiling System's relevancy, structure, and content. The System was created to account for individual differences in learning and to identify learner preferences for modified and diversified instructional delivery.

The Profiling System/Using Psychological Type and Learning Style to provide

adaptations for teaching methodology in the Regular and Special Education classroom

The Profiling System (PS) uses the concepts of psychological type and learning style to

assess and screen for learning difficulties and problems in elementary age children in order to

develop appropriate learning objectives. Additionally, it contains suggested academic and

instructional interventions, which are based on the students' psychological type and preferred

learning style to remediate, modify and accommodate for their learning difficulties. The System

was created to account for individual differences in learning and to identify learner preferences

for modified and diversified instructional delivery.

The first part of this paper discusses the need for considering individual differences in the

methodology of teaching. Then an explanation follows of why the Profiling System was

conceived. A description of the current status of the system and its future development is also

presented. Some current perspectives on teaching are extended. Brief sketches are given of

generally accepted manifestations of learning style and psychological type and their application

to education. Then follows a review of the structure of the Profiling System (PS) and its content.

An overview is given of what the PS might contribute to regular and special education teachers.

And, lastly, comes a discussion on the research findings of matching learning style with

instruction to increase academic achievement.

Individual Differences

Considerable work by educators and psychologists has gone into examining individual

differences in the classroom. Messick (1976) identified more than 20 dimensions of cognitive

style that have derived, for the most part, from the research in laboratory investigations studying

cognitive differences. Educational researchers became interested in the implications of cognitive-style research for adapting instruction for different types of students. In some cases they have used cognitive style instruments in educational settings. They have also developed special instruments for use by teachers (Dembo, 1994). As a result, the term learning style is used to identify this new orientation. Although definitions of learning style differ, most definitions focus on individual differences that influence learning in the classroom.

In reviewing empirical studies of adaptive instruction used in regular and special education classrooms; researchers have found that one of the most important features of promoting successful learning was to maintain an instructional match for each student (Wang & Baker, 1985). Following the teaching methodology of special education, the Profiling System sought to consider individual differences to improve teaching methodology and to consider these differences to suggest instructional solutions for learning problems. Much of the present practice in special education, for example, has its roots in the medical model that physicians uses to treat their patients: they diagnose an illness in terms of what has caused it and then prescribe medication or some other remedy to cure it.

In fact, the term "diagnostic prescriptive teaching" was used in an article discussing this type of teaching methodology (Gettinger, 1984). Others in the field of special education use models from psychology to explain how children acquire, retain, and apply information. Still others may focus particular attention upon sensory modalities as the vehicle to learning-analyzing, for example, whether a child learns better from visual, auditory, or tactile stimuli. Much in the same way, the Profiling System considers learning style and psychological type as vehicles to learning. These examples represent an extremely simplified view of the biases and assumptions informing the many and diverse instructional practices employed by professionals in

special education. In spite of these differences in points of view, special educators do share a

common, if not universal, conviction about teaching students with learning difficulties. This

common ground is their view that students with difficulties require a more detailed assessment of

strengths and needs, greater individualization of instruction and curriculum, and more careful

systematic monitoring of performance to prevent them from falling behind on tasks that normal

students might be expected to learn almost independently (Haring, and McCormick, 1994).

<u>Conception of the Profiling System</u>

So the Profiling System was conceived and created with the intentions of considering the

individual differences of children with learning difficulties. Similar to the description of

cognitive style instruments in Myron Dembo's book (1994); the Profiling System intended to

create a special instrument that teachers can use for formative evaluation of students to adapt

instruction to their needs. An instrument designed to give easy access to instructional ideas and

assessment tools. One of the best aspects of this instrument is the varied instructional

adaptations and interventions which can be used for all children in any classroom setting. These

interventions are simply examples of good teaching methodology. They are instructional ideas

that combine the knowledge of special education methodology with the experience of both

regular and special education teachers.

Primarily, the Profiling System was formulated for teachers to be used as an instructional

resource, an addition to their own curriculum requirements and responsibilities. An instrument

to be reviewed for interesting ideas and assessment opportunities so that the student may benefit

from a diversified teaching approach. Later, this paper will discuss the findings of current

research on matching learning style with instruction with the intention to increase academic

achievement.

Status of the Profiling System

Currently the Profiling System is still in the process of development. Its content and structure are being revised and must be considered a work in progress. Formal data collection and analysis will be started in the near future. The suggested instructional interventions are still being compiled and documented. Reliability and validity measures will be considered and performed. But at this point, formal data collection is being organized and coordinated. A sample of at least twenty teachers in Houston, Texas will be recruited on a volunteer basis to use the system for three consecutive grading periods. Training and support services will be provided prior to those grading periods. During the first period, teachers will assess the students with different instruments under supervised conditions. These supervised assessments will provide baseline data on student academic skill development. Then in the last two grading periods the teachers would use the Profiling System as they saw necessary with guidance and support from trainers.

Anecdotal records and journal entries will be kept regarding teacher perceptions, attitudes and thoughts about the system. Teachers will also be interviewed about these perceptions on the usefulness of the Profiling System. As mentioned above, the student assessments included in the Profiling System will be used as a measure of baseline data to establish the children's starting point in skills and abilities. The students will then be tested again with the same type assessments in a repeated measure process in order to gauge the continuity of skills and academic growth. These student assessments will be combined with the interviews, and teacher records of attitudes to determine the applicability and performance of the Profiling System on academic achievement and teaching methodology. Therefore, a mixture of qualitative and quantitative

information will be gathered to begin to understand the potential of this type of cognitive style instrument on improving academic achievement for children with learning difficulties.

In the fall of 1996, a small pilot study with six teachers was completed. The PS was used in six classrooms. Two were special education classrooms and four were regular education classrooms. The purpose of this small scale pilot study was to acquire an understanding and awareness for the possible usefulness of this type of system with children who had learning difficulties. Some informal interview information was obtained from the selected teachers. The teachers were asked to review and choose assessment instruments that they thought were relevant to their student observations and needs. Then the teachers were shown how to combine the assessment results to the instructional interventions using individual learning style preferences for improved teaching methodology. They were asked to comment and discuss their thoughts on the applicability and the ease of use of the PS in their classrooms. This paper presents these teacher responses later in the section on contributions made by the Profiling System to regular and special education teachers.

Teaching Perspectives

Teachers must be prepared to draw from an ample instructional repertoire to achieve active and successful academic engagement with all learners. Teaching is more than the application of knowledge and procedures in the classroom to produce learning outcomes. It is a complex array of decision making and problem solving. Good teaching, effective teaching, requires an acute ability to determine appropriate instructional methodologies and delivery modes to include all students actively in the learning process. Gage (1984) emphasized that teaching is spontaneity, handling of many tasks, lectures, discussions, tutoring, and questioning. Munroe (1983) stated that effective teaching styles need to be natural, automatic, and consistent.

Most teaching patterns are the result of practice, and teachers tend to teach the way they learn best.

Certainly, teaching is more than a set of prescriptions written for some specified label or categorical description of a particular student. Therefore, caution must be exercised when considering the limitations of psychological type and learning preference with instructional modification. These preferences evidenced by children must be considered in the context of their skills and abilities, in the context of the whole person, and finally in the context of the total learning environment. Regular education or special education teachers must give themselves the opportunity to understand the child in a holistic and comprehensive manner; considering the child's emotional, psychological, social, and academic backgrounds. Adhering stringently to the medical model of teaching and learning can be limited in its scope and effect.

On the other hand, accounting for learning style and preferences in teaching methodology has been shown to be successful with certain at risk populations. Levine and associates (1985) have studied the effectiveness of learning style considerations with low SES and minority students. They state that instruction was effective for low SES students only when their learning style was considered. A study of several public elementary schools to determine causes for success in teaching reading was presented. This study revealed that instructional efficiency involved adapting instruction based on students needs, monitoring the progress of students, and consistent sequential instruction (Venezky & Winfield, 1979). These findings begin to support the notion that teachers must learn to make modifications for certain learning styles and develop alternative methods of instructional delivery in order to assist children with learning difficulties.

When considering student difficulties and problems in the classroom, there is a host of variables that the teacher can consider. Some of these variables include classroom setting,

instructional methods, behavioral management, and curriculum. After addressing any of these variables, or combination of these variables, the student may still continue to have difficulties. Children with unique needs may continue to demonstrate an inability to overcome problems in mastering content or skills at the appropriate grade level. Then the classroom teacher may need to consider another form of assessment to pinpoint the area of difficulty.

In a clinical setting, where children have already been referred for suspected learning disabilities, the student would be evaluated by a battery of aptitude and academic ability tests given by professionally trained diagnosticians, psychometricians, or specialists in testing and evaluation. However, in the classroom, the teacher's limited time and resources inhibit the ability to use lengthy formal testing to make instructional decisions.

First, teachers observe and suspect a certain learning difficulty. As a consequence, they try to evaluate the problem with various pieces of information and assessment questions. The information collected on the student could include student artifacts, anecdotal records, portfolio products, and both formal and informal curriculum assessment instruments or observations. The teacher may also include standardized tests to provide a more comparative form of achievement with respect to other similar children in the same classroom.

Regardless, the teacher still faces the task of integrating and interpreting these student assessments in order to make appropriate instructional decisions. The Profiling System is intended to assist the teacher in making this integration between assessment and intervention in order to develop alternative methods of instruction. Assessment is the collection of information to identify problems and make educational decisions (Salvia & Ysseldyke, 1988). Therefore, it is an ongoing and continuous process which is a part of instructional intervention in the classroom (Wood, 1992).

Successful academic outcomes may depend on producing appropriate interventions based on accurate assessment techniques. The interventions may include adapting instruction according to the individual student's learning style, or organizing the classroom or the lesson presentation in a different format (Wood, 1992). The term learning style is used to encompass four aspects of the person: cognitive style, i.e., preferred or habitual patterns of mental functioning; patterns of attitudes and interests that affect what an individual will pay most attention to in a learning situation; a tendency to seek situations compatible with one's own learning pattern; and a tendency to use certain learning strategies and avoid others (Lawrence, 1984).

Learning Style and Psychological Type

At least twenty dimensions of learning style have been identified (Parry, 1984; Shipman & Shipman, 1985). However, for the purposes incorporated into the Profiling System, only the following dimensions have been included: visual, tactile, and kinesthetic. These three learning styles refer to the general manner in which students process and perceive incoming information. The PS also utilizes three of the four constructs found in the Myers-Briggs Type Indicator (Myers & McCaulley, 1985) which contributes four dichotomous dimensions to learning style: extroversion vs introversion, sensing vs intuition, thinking vs feeling, and judgment vs perception. The assessment of these psychological types is completed by the use of observational checklists. These checklists are casual utilizations of concepts of learning style and psychological type. It should be noted that these checklists depend heavily on the subjective opinion and observation by the classroom teacher.

Psychological type has roots that date back more than sixty years, when Carl Jung suggested that human behavior was not random but was in fact predictable and, therefore,

classifiable. At the start, Jung was out of step with many of his colleagues because he suggested that the categories he proposed, for which he coined some new words, were not based on psychological sicknesses, abnormalities, or disproportionate drives. Instead, Jung said, differences in behaviors, which seem so obvious to the eye, are the result of preferences related to the basic functions our personalities perform throughout life (Kroeger & Theusen, 1988).

The personalities that travel through our regular and special education classrooms today, come to school with varied cultural, social, academic, and emotional needs. Their learning strengths and needs are as varied as their backgrounds, and so are their learning styles and psychological preferences. Teachers must discard the myth that all children will learn at the same rate, in the same way, and for the same reasons. Matching psychological type and learning style with instruction to enhance learning are just two ways of engaging in the teaching learning process. Messick (1976) states that if there is anything that research in individual differences has concluded, it is that children learn at different rates, in different ways, and for different reasons.

Thus, considering individual differences is a very important component when deciding how to teach all students in the classroom. Teachers need to make some modifications in response to their students' level of attention, memory, and language development, and motivational differences (Short & Weissberg-Benchell, 1989). With experience, teachers sometimes discover that procedures effective at one grade level are less effective at another. Many differences abound, even among students of the same age or stage of development.

Principals of learning and motivation can help you determine the conditions that will help different students improve their performances. (Dembo, 1994). R. Gagne (1985) points out that not all learning is the same and that the instructor needs to teach differently to effect different kinds of learning. And because children bring very different competencies and attitudes to the

12

learning environment, they may need different instructional experiences (Haring, Haring & McCormick, 1994).

Thus, teaching to match individual learning style preferences is seen to be another way of providing appropriate instruction as long as teachers are aware of the fallibility of many learning style instruments and remain flexible to changes in students over time (Given, 1996). There are many ways of attempting to match student learning styles and teaching methodology. The Profiling System informally combines the information of individual learning style preference, psychological type preference, and diagnostic teaching to provide alternative approaches in instruction. Examples of how the Profiling System combines the information will be forthcoming in the descriptions of its structure and content.

The Profiling System

The Profiling System begins its presentation with an explanation of the purposes and uses for diagnostic teaching approaches with students exhibiting learning problems. Included in the Profiling System are eight different sections. Section I provides the teacher with the student answer sheets to the total of 20 tests and checklists which help define current academic skills, perceptual problems, and possible deficiencies that the student may be experiencing in the classroom. Section I also presents the general directions for conducting the assessments. The student answer sheets are followed by the four domains checklist for psychological type. This checklist is a quick method of identifying, very informally, the tendency of each student to exhibit some behaviors and preferences in differing contexts and conceptual areas. Some of the identifiers are: sociability or territoriality, sensitive or imaginative, critique or appreciate, planned or open-ended.

After the Type checklist, the learning style checklist determines what tendencies the

student demonstrates with respect to 3 possible domains. The three domains include visual,

auditory, and tactile. The next two assessments screen for perceptual and visual discrimination

problems. And, lastly, the Visual Perception and Perceptual Problems tests 1 & 2 are followed

by the various student tests ranging from "Counts objects", "Oral reading", "Word recognition",

and "Computational skills", to "Word problems". These academic assessments are revised and

altered test concepts from the Brigance Comprehensive Inventory of Basic Skills (1983) which is

referenced in the Profiling System. Examples of the psychological type checklist and the

learning style checklist, as well as examples of other checklists, student assessments, student

tests and answer sheets are given in Appendix A.

Section II includes the Profile Recorder Sheet and is an 11 page summary of the scores

for each of the assessments and student tests. The Profile Recorder Sheet also contains a key

organizer for a list of remediations, modifications, and accommodations as per their

complimentary learning style (visual, tactile, and kinesthetic). Psychological type is then

combined with these three learning style domains to create triadic descriptions such as

visual/intuitive/feeler = VNF, or tactile/sensing/perceiver=TSP, or kinesthetic/intuitive

thinker=KNT. The purpose of the Profiling System is to code the interventions to match these

triadic descriptions in chart form. An attached sample of this Profile Recorder Sheet can be

found in Appendix B.

Section III includes the Tunnel Glance Chart and student Pre-Referral Form. This chart is

intended to give assistance to teachers to look at the results of student assessments from a visual

perspective. The chart can be used as a visual reference for current student academic skill needs

while the teacher prepares lesson plans. The teacher can use the chart in order to take advantage

of all students' strengths as well as their preferred learning styles and psychological type. The

Pre-Referral Form can be used by the teacher to document student assessment results and scores,

grade level, previously attempted interventions (remediations, modifications, and adaptations)and

to refer a student for further diagnostic evaluation if necessary. This form also has a place to

record the duration of the interventions and results achieved.

Section IV includes Psychological type explanations. These explanations describe the

basis of personality along the four dichotomous domains in addition to portraying the construct

of temperament. Teaching strategies according to temperament are then listed in subsections

such as NF- Idealists, SJ - Guardians, NT - Rationals, and SP - Artisans. Also teaching strategies

according to psychological type are outlined. Section V includes teaching strategies for three

learning styles, visual, auditory, and tactile/kinesthetic. The Recorder Sheet includes coded

interventions with a triadic description using visual, tactile and kinesthetic learning styles.

Section VII explains in detail the definitions and characterizations of remediations,

modifications, and accommodation. These three gradual degrees of teaching adaptation are

suggested to be used alone, or in concert with each other. These interventions are then delineated

under the previously coded listing in section II above. Activities and interventions are given to

match the learning problem, such as visual perception, readiness, oral reading, and

comprehension. Each remediation, modification and accommodation possesses its own specific

learning style and psychological type categorical preference. For example, rededication 2.b:

"Use clay practice, making and saying p as the student forms the clay" is described to be a

rededication that serves the visual, auditory, tactile, intuitive feeler, and sensing perceiver. This

rededication is suggested for visual perception problems. Modification 48: "Have the student

read progressively longer segments of reading material in order to build comprehension skills

(e.g. begin with a single paragraph and progress to several paragraphs, chapters, etc)" is described to be a modification that serves the visual, sensing judger. This modification is suggested for comprehension problems. Accommodation 76: "Provide the student with a checklist to follow in solving math word problems" is described as an accommodation that serves the visual, sensing judger and sensing perceiver. These interventions conclude the major function of the Profiling System. They are the strength of this prescriptive cognitive style instrument, offering educators alternative methods of teaching methodology.

Contributions of the Profiling System

Certainly the idea of how to improve teaching methodology to actively engage all students in learning is a relevant one. Additionally, to ask oneself how to specifically cater to the varied individual differences found in these classrooms is also relevant. How can regular education classrooms and special education classrooms communicate to create a practical and collaborative mode of operation to benefit all students? Could the Profiling System be an example of how that communication can begin? More than anything else, this system stimulated multiple concerns for the authors to look more carefully at adapting instruction to individual differences. As educators, administrators, teachers, and other educational practitioners, we should never consider one product, one device, or any one system to be the solution to all instructional and academic conflicts in the classrooms.

What does the Profiling System contribute to regular and special education teachers? The Profiling System includes formative evaluation instruments that focus on adapting instruction to make teaching more effective. The system provides an extensive pool of possible instructional interventions that can be used with all children. In addition, the regular and special education teachers involved in the small pilot study commented the following: that the PS was a great idea,

a good beginning to helping teachers assess student preferences and skill needs, but that the PS was a little complicated. Teachers also stated that the academic tests were simple enough to easily measure where student current abilities ranged.

Therefore, based on the informal interview responses and the small pilot study completed, I believe that the Profiling System has the potential to help teachers as an instructional resource for good teaching ideas and interventions. Furthermore, the Profiling System might assist teachers in their organization of student observations, in documenting learning behavior, and in recording the students' academic skill needs. The Profiling System is intended for use in conjunction with and in combination to other teaching resources and tools to make sound instructional decisions. The PS is essentially a resource, one way of delineating learning problems in the classroom and providing possible suggestions for improving these problems. Even though conceptually, this system of instructional intervention is diagnostic and prescriptive in nature, the PS was initially conceived to be a vehicle, a resource, for improving and diversifying teaching methodology and to be used as a vehicle to understand that students have unique preferences, styles, and tendencies in learning.

This is a conceptual framework that pre-service and in-service teacher training might use to introduce the concepts of psychological type and learning style to novice teachers. At least it has the potential for acquainting novice teachers with the necessity for alternative instructional approaches. Novice teachers are especially in need of being exposed to alternative methods of instructional delivery. That is why the PS highlights generally effective teaching strategies that can be applied to many students with ranging abilities.

Research on matching Learning Style with Instruction

In reviewing the literature for matching learning style with instruction there are arguments and counter arguments. Myron Dembo (1994) depicts this discourse very nicely. One of the major arguments is presented mostly by the research completed by Rita and Kenneth Dunn (1972, 1987). They have developed the Learning Style Inventory to identify student learning styles so that teachers can group students on that basis and develop special learning environments for them. The Dunn's research supports greater classroom learning when teachers match instruction and students' learning styles. Then there is the counter argument. Cohen et al.(1989), in a review of the research on instruction, indicate that achievement gains are greater when teachers match objectives, instruction, and testing, than when attempts are made to match learning style and instruction.

Their conclusion is supported by other research (Cronbach & Snow, 1977; Kampwirth & Bates, 1980). In addition, some scholars criticize the Dunn's research on methodological grounds (Curry, 1990; Snider, 1990). In any case, Doyle and Rutherford (1984) note the problems inherent in trying to match learning styles with instruction, including deciding which of the many styles representing in a classroom are important, measuring the styles, and making decisions about how to apply sometimes hundreds of learning style/instructional strategy combinations generated by current instruments.

Conclusions

Clearly more research and investigation are needed. I believe, extensive research needs to be focused on finding ways to provide teachers the necessary knowledge and tools to produce their own solutions to instructional problems. In this endeavor, studies must be completed across disciplines and demographic populations in order to include a representative student sample. The

Profiling System was intended to provide intervention strategies and alternative instructional approaches for learning difficulties. With the Profiling System, the teacher can begin her or his exploration of diversified teaching methodologies. A primary expectation is that much more consistency of instructional intervention will be attained when the Profiling System is used by educators working with the student across classrooms and educational environments.

References

Brigance, A. H. (1983). Comprehensive inventory of basic skills. Massachusetts: Curriculum Associates, Inc.

Cohen, S. A., Hyman, J. S., Ascroft, L., & Loveless, D. (1989). Comparing effects of metacognition, learning styles, and human attributes with alignment. Paper presented at the annual meeting of the American Educational Research Association, San Fransisco.

Cronbach, L. J., & Snow, R. E. (1977). Aptitudes and instructional methods: A handbook for research on interactions. New York: Irvington.

Curry, L. (1990). A critique of research on learning styles. Educational Leadership, 48(2), 50-52, 54-56.

Dembo, M. H. (1994). Applying educational psychology. (5th ed.). White Plains, NY: Longman Group Ltd.

Doyle, W., & Rutherford, B. (1984). Classroom research on matching learning and teaching styles. Theory into Practice, 23, 20-25.

Dunn, R., & Dunn K. (1972). Practical approaches to individualizing instruction. West Nyack, NY: Parker.

Dunn, R., & Dunn K. (1987). Dispelling outmoded beliefs about student learning. Educational Leadership, 46, 55-62.

Gage, N. L. (1983). When does research on teaching yield implications for practice. The Elementary School Journal, 83, 492-496.

Gettinger, M. (1984). Measuring time needed for learning to predict learning outcomes. Exceptional Children, 54, 145-150. S

Given, B. K. (1996). Mild learning disability or learning style difference? (ERIC

Document Reproduction Service No. ED 395431.

Haring, N. G., Haring, T. G., & McCormick, L. (1994). Exceptional children and youth.

(6th ed.) New York, NY: Macmillan.

Kampwirth, T. J., & Bates, M. (1980). Modality preference and teaching methods: A

review of the research. Academic Therapy, 15, 597-605.

Kroeger, O. & Theusen, J. M.(1988). Type Talk. New York, NY: Dell Publishing.

Lawrence, G. (1984).   A synthesis of learning style research involving the MBTI. Journal

of Psychological Type, 8, 2-15.

Levine, D. U., Levine, R. R.& Eubanks, E. E. (1985). Successful implementation of

instruction at inner city schools. Journal of Negro Education, 54, 313-332.

Messick, S. (1976). Individuality in learning: Implications of cognitive styles and

creativity for human development. San Francisco: Jossey-Bass.

Munroe, M. J. (1983). Effective teacher behaviors. (ERIC Document Reproduction

Service No. ED 243233).

Myers, I. & McCaulley, M. (1985). Manual: A guide to the development and use of the

Myers-Briggs type indicator. Palo Alto, CA: Consulting Psychologists Press.

Parry, T. S. (1984).   The relationship of selected dimensions of learner cognitive style,

aptitude, and general intelligence factors to selected foreign language proficiency tasks of second

year students of Spanish at secondary level. Unpublished doctoral dissertation, Ohio State

University, Columbus, OH.

Salvia, J., & Ysseldyke, J. (1988). Assessment in special and remedial education (4th

ed.). Boston, MA: Houghton Mifflin.

Shipman, S. & Shipman, V. (1985). Cognitive styles: some methodological, and applied issues. In E. Gordon (Ed.) Review of research in education, v12, 229-91. Washington, DC: AERA References

Short, E. J., & Weissberg-Genchel, J. A. (1989). The triple alliance for learning: Cognition, metacognition, and motivation. In C. B. McCormick, G. E. Miller, & M. Pressley (Eds.), Cognitive strategy research: From basic research to educational applications. New York: Springer Verlag.

Snider, V. (1990). What we know about learning styles from research in special education. Educational Leadership, 48(2), 53.

Venezky, R. L. & Winfield, L. (1979). Schools that succeed beyond expectations in teaching reading. Newark, DE: University of Delaware.

Wang, M. C., & Baker, E. T. (1985). Mainstreaming programs: Design features and effects. Journal of Special Education. 19, 503-521.

Woods, J. W. (1992). Adapting instruction for mainstreamed and at-risk students (2nd ed.). New York, NY: Macmillan.

Check List 1: Psychological Type: There seems to be a definite vocabulary associated with each preference for the four scales or domains that make up a students psychological type. By reading the word list on the left and on the right for each domain and determining which word fits the student best. Place a check mark by that word leaving the other word blank. If you can't decide between two words simply skip them.

DOMAIN 1: EXTROVERSION VS. INTROVERSION

☐sociability	OR	☐territoriality	☐breadth	OR	☐depth
☐external	OR	☐internal	☐extensive	OR	☐intensive
☐interaction	OR	☐concentration	☐external events	OR	☐internal reaction
☐friends, lots	OR	☐friends, few	☐energy, spend	OR	☐energy, save

Total: ☐= E   ☐= I   ☐ = E   ☐ = I

Totals 1:   E's=☐   I's=☐

DOMAIN II: SENSING VS. INTUITION

☐ experience	OR	☐ hunches	☐ past	OR	☐ future
☐ realistic	OR	☐ speculative	☐ perspiration	OR	☐ inspiration
☐ actual	OR	☐ possible	☐ down-to-earth	OR	☐ head-in-clouds
☐ utility	OR	☐ fantasy	☐ fact	OR	☐ fiction
☐ ingenuity	OR	☐ practicality	☐ sensible	OR	☐ imaginative

Total: ☐= S   ☐= N   ☐ = S   ☐ = N

Totals 1:   S's=☐   N's=☐

DOMAIN 3: THINKING VS. FEELING

☐ objective	OR	☐ subjective	☐ principles	OR	☐ values
☐ policy	OR	☐ social values	☐ laws	OR	☐ circumstances
☐ criterion	OR	☐ intimacy	☐ firmness	OR	☐ persuasion
☐ personal	OR	☐ impersonal	☐ justice	OR	☐ humane
☐ categories	OR	☐ harmony	☐ standards	OR	☐ good or bad
☐ critique	OR	☐ appreciate	☐ analysis	OR	☐ sympathy

Total: ☐= T   ☐= F   ☐ = T   ☐ = F

Totals 1:   T's=☐   F's=☐

DOMAIN 4: JUDGEMENT VS. PERCEPTION

☐ settled	OR	☐ pending	☐ decided	OR	☐ gather more data
☐ fixed	OR	☐ flexible	☐ plan ahead	OR	☐ apt as you go
☐ closure	OR	☐open options	☐ run one's life	OR	☐ let life happen
☐ planned	OR	☐open ended	☐ decision-making	OR	☐ treasure hunting
☐ completed	OR	☐ emergent	☐ decisive	OR	☐ tentative
☐ urgency	OR	☐ plenty of time	☐ deadline!	OR	☐ what deadline?

Total: ☐= J   ☐=P   ☐ = J   ☐ = P

Totals 1:   J's=☐   Ps=☐

SCORING: From each of the four domains above, only the letter with the most checks is selected. If both letters from a domain are tied then the individual will be declared undecided and indicated by a U. From each of the domains above, select the letter with the most checks and enter them in the blocks below.

Domain 1:☐   Domain 2:☐   Domain 3:☐   Domain 4:☐

Transfer this information to the profile recorder sheet in the blocks marked: Domain 1, Domain 2, Domain 3, Domain 4.

Tunnel Profiling System 29

Check List 2: Learning Style. .n order to establish the preferred le..ning style for the student complete to following checklist. Simply place a check by each of the activities the child enjoys as observed during classroom activities.

DOMAIN 1: VISUAL LEARNER

- ☐ Loves color, and movement.
- ☐ Art work shows many colors; much detail.
- ☐ Notices if you change bulletin board.
- ☐ Notices your new outfit.
- ☐ Needs examples to do work.
- ☐ Wants to be "shown how."

Total 1: V's = ☐

DOMAIN 2: AUDITORY LEARNER

- ☐ Loves noise.
- ☐ Taps on desk.
- ☐ Frequently talks loudly and a lot.
- ☐ Reads very laboriously, if reading aloud.
- ☐ Whispers aloud when reading silently.
- ☐ Whispers aloud when doing math.

Total 2: A's = ☐

DOMAIN 3: TACTILE LEARNER

- ☐ Neither looks nor listens.
- ☐ Usually a nonreader.
- ☐ Put things in his mouth.
- ☐ Touches other people, rubs.
- ☐ Pre-occupied with things; pencil, paper.
- ☐ Easily frustrated.

Total 3: T's = ☐

HINT BLOCK: In some instances a students learning style may have already been identified. If this is the case this checklist can be disregarded. If you or your school has access to a more extensive test of preferred learning style, it is suggested that it be used in lieu of this checklist. Although the reliability and validity of this test is high, other tests that are designed to be completed by the student may, in some cases, be a better indicator of preferred learning style.

SCORING: The students learning style is indicated by a V for visual, A for auditory or T for Tactile. It is indicated by the domain with the most checks. If more than one domain receives the same number of checks then the visual learning style of M is indicated for multi-modality. Count up the checks and enter the learning style indicator of V, A, T or M below.

Learning Style ☐ Transfer this score to the profile recorder sheet in the block marked SPLS.

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Check List 4: Visual Percepti... Deficits: Visual perception is a p... ess involving the receiving of visual stimuli, and interpreting them on the basis of past experiences. The checklist below is used to identify visual perception problems that may need to be reported to a school nurse for further evaluation. Use this checklist while the student reads the passage on the student answer sheet under the heading; Checklist #4 Visual Perception. This checklist should also be conducted while asking the student to read information from the chalkboard or a bulletin board.

PERCEPTUAL PROBLEMS to be examined

From Reading Passage	From Chalk Board	
☐	☐	Child complains of seeing double.
☐	☐	Child squints of blinks excessively.
☐	☐	Child closes one eye while working or reading.
☐	☐	Child turns head to one side while working or reading.
☐	☐	Child complains of headaches.
☐	☐	Child becomes tired, sleep, while reading.
☐	☐	Child complains of blurry print, eyes get red or itchy.

Hint Block: Because the above items can happen at any time, it is important to keep them in mind. If at any time any of the above items is noticed in any student, it will be important to execute this checklist. Remember, diagnosing and assessing is an ongoing process. While a child may not have a perceptual problem now, they may develop as the student grows.

SCORING: Make a referral letter to the school nurse outlining your observations from the above checklist. Request that the nurse conduct or make arrangements to conduct a complete visual examination from an ophthalmologist not an optometrist.

Check List 3: Visual Perception Deficits: Visual perception is a process involving the receiving of visual stimuli, and interpreting them on the basis of past experiences. The checklist below is used in conjunction with Test #2, Visual Perception, to identify and provide remediations. Using several samples of the students work, check to see if any of the items below are indicated. If so, mark them with a check.

PERCEPTUAL PROBLEMS to be remediated

☐ Reversals for b, d, p, q, s, z, j, 3 or any others.

☐ Inversions for n, u, m, w, 6, 9

☐ Letter confusion for h, n, b, d, r, n, etc...

☐ Sequencing problems like on for no, saw for was.

Hint Block: Use a collection of the students work to use with this checklist. After you become familiar with the elements of the checklist, you will become more observant of these problem areas in all of your students work. Because the success of any remediation will be based on future observations, it is essential that the above checklist be utilized at least once a week using the students current collection of work. This can be done by annotating a simple reminder by the students name. The remediations can then be monitored to see whether or not they are effective.

SCORING: The areas of Visual Perception that can be remediated are identified by the checklist above. Transfer these checks to the Profile Recorder Sheet in the boxes marked:

Visual Perception Deficits - 1: ☐R ☐I ☐L ☐S

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Test #12: Oral reading a second grade level: Reads orally at second grade level with at least 70% accuracy with no more than two errors (substitution, omission or insertion).

Directions: (This assessment is made by asking the student to read the story orally.) Say: *I want you to read this story aloud, or read this word again.* Use the reading card on the student answer sheet. Place a circle around correctly read words. Draw a box around incorrectly read words. Place a line through words that are skipped.
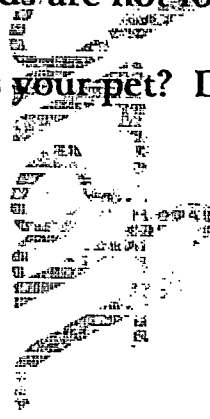
Tim told the man he needed some seeds. The man thought that Tim wanted to eat the seeds.

The man said, "Children like to eat seeds, don't they?"

Tim said, "Yes, I like seeds but these seeds are not for me. I'm buying these seeds for my pet."

The man asked, "What kind of animal is your pet? Do you have a bear?"

Tim said, "No, my pet is a bird."

Hint Block: If subsequent testing is needed, the same test can be constructed using words selected from the students basal reading series. Simply select the words and create a story of your own. If this is done you should consider sharing the story and the diagnostic format with other teachers.

Reading Interview: After the student has read the above passage ask the following questions: When you're reading and you come to something you don't know, what do you do? When you're reading and you have some trouble, or you come to something that gives you a problem, what do you do? The answer to these questions will help you to determine what strategies (if any) the student knows or needs to become aware of.

SCORING: Place the number of words read correctly in the box marked.

Oral Reading 2nd: ☐ on the Profile Recorder Sheet.

Tunnel Profiling System 48

Test #23: Computational Skills: Add and Subtract with adequate computational skills.

Directions: (This assessment is made by asking the student to compute the problems.)
Say: *When I tell you to begin, do each of the problems. Be sure to work carefully and do as the signs tell you.* Use the work sheet on the student answer sheet.

1.	3	7	2.	27	347	3.	276	312
	+2	-4		+45	-216		+347	-299

4.	4	9	5.	16	247	6.	356	311
	+2	-5		+49	-116		+147	-277

Hint Block:

SCORING: Place the number of computations answered correctly in the box marked:
Computational Skills : ☐ on the Profile Recorder Sheet.

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Test #24: Word Problems. Comprehends and computes word problem at first, second or third grade levels. Additional assessment may be appropriate.

Directions: (This assessment is made by asking the student to solve the word problem.) Say: *When I tell you to begin, read each of the word problems. Do as many as you can. Write your answers in the blanks.* **NOTE:** If necessary, give help reading the word problems!! Use the work sheet on the student answer sheet.

1 - Marsha rode her bicycle 7 miles on Saturday and 4 miles on Sunday. How many miles did she ride on both days?_____ miles

2 - The Sun family traveled 482 miles the first day of their trip and 394 miles the second day. How many miles did they travel?_____ miles

3 - Lee, Helen, and Jake have the same amount of money each. Together they have $12.00. How much money does each child have? $_____

Hint Block:

SCORING Place the grade level, appropriately answered, in the box marked: **Word Problems:** ☐ on the Profile Recorder Sheet.

Using the KEY select from the following:

KEY	Remediations	Modifications	Accommodations
VNT	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
VNF	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
VSJ	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
VSP	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
KNT	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
KNF	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
KSJ	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
KSP	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
TNT	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
TNF	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
TSJ	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	
TSP	R.30, R.31, R.32, R.33	M.75, M.76, M.77, M.78	

Visual Discrimination -1: ☐

Visual Discrimination -2: ☐

If the student demonstrates 3 or more missed items, see the section on Remediations, Modifications, and Accommodations that matches the students particular problem area.

Using the KEY select from the following:

KEY	Remediations	Modifications	Accommodations
VNT			
VNF			
VSJ			
VSP			
KNT			
KNF			
KSJ			
KSP			
TNT			
TNF			
TSJ			
TSP			

Visual Closure: ☐

If the student demonstrates 3 or more missed items, see the section on Remediations, Modifications, and Accommodations that matches the students particular problem area.

30

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