

Purdue Academic Rating Scales¹

The *Purdue Academic Rating Scales (PARS)* are designed for teachers' assessments of students' performance in specific subject matter areas: science, social studies, English, mathematics, and foreign languages. The items were developed from classroom observations by teachers, from a review of the professional literature in each area, and from trial administration of the scales. Details of the development and validation of the scales are presented in Chapters Six and Seven.

The *Purdue Academic Rating Scales* were developed to give secondary teachers an opportunity to evaluate students specifically as learners in the disciplines. Teachers often complain that general rating scales for identifying the gifted contain items which the teachers had no opportunity to observe. These scales are derived directly from teachers' classroom experience with superior students.

Each item is a characteristic or behavior of a superior student in the specific subject matter. Teachers should be able to observe the behavior in their students. There is considerable variation in the manifestation of these traits in each person and from person to person. As teachers complete a scale they should remember that each item must be considered independently from ratings given on other items. Furthermore, while a particular student may not display *all* of the components listed for a specific item, s/he should be rated using the full range of 1-4 options for the observed components. Under no circumstances should a student be marked down for not possessing or demonstrating all of the behaviours in an item. For example, a teacher may have observed that a student enjoys science fiction (item #2, Science scale) but has not demonstrated an interest in science programs. This student should not be rated lower for a lack of observed interest in science programs and books. In essence, each item provides a behavioral concept and should not be split into separate components, nor should the teacher-rater expect the student to exhibit all components of the item concept.

Read each item and rate the student according to this (1-4) scale:

1. If the student rarely, seldom or never displays this characteristic.
2. If the student occasionally or sometimes displays the characteristic.
3. If the student often or frequently displays the characteristic.
4. If the student displays the characteristic always or almost always.

DK Don't know or have never observed.

It would be desirable to have two or more teachers do the ratings on each prospective student and derive an average rating. Teachers should also take time to discuss their ratings to try to agree on the nature and frequency of the behaviours observed. They

¹ Feldhusen, J. F., Hoover, S. M., & Sayler, M. F. (1990). *Identifying and educating gifted students at the secondary level*. Unionville, New York: Trillium Press. (Ch. 2, pp 5-11)

should strive for objectivity in doing the ratings and especially avoid the halo effect (rating each item on the basis of a general impression of the student).

Each student who is nominated and rated by one or more teachers should rate him or herself with the same scale. The self-rating should be included in the packet of talent identification material for the student.

Perfect accuracy is never possible with any measurement or rating scale. However, with effort it is possible to achieve reasonable reliability with these rating scales. The results should be used as one aspect of student evaluation, *never* as the sole criterion for admission to a program. Potentially they can provide an invaluable supplement to achievement tests and grades in selecting youth for honours classes, acceleration opportunities, seminars, mentor programs, and College Board Advanced Placement classes.

Norms should be developed for local use in identifying students for special classes, services, or programs. Generally a frequency distribution can be developed for the total scores on each of the five scales. Students in the top ten percent will frequently be selected then as nominees for the special classes, services, or programs. The scores may then be combined with other appropriate data such as grades or grade averages, standardized achievement test scores, IQs, etc., to derive an overall eligibility index. The best way to combine scores is by first converting them to a standardized form (e.g., T or Z scores) and then combining them (Feldhusen, Baska, Womble, 1981; Feldhusen, Asher, Hoover, 1984). The total scores can again be ranked and top scorers selected for the program, services, or classes.

PURDUE ACADEMIC RATING SCALE: MATHEMATICS

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

Read each item and rate the student according to this scale:

- | | |
|----------------------------|------------------------------|
| 1. Rarely, seldom or never | 3. Quite often or frequently |
| 2. Occasionally, sometimes | 4. Always or almost always |

DK Don't know or have never observed

	1. Generalizes mathematical relationships, relates concepts in various applications.
	2. Organizes data to discover patterns or relationships.
	3. Persistent in learning math, concentrates, works hard, motivated, interested.
	4. Analyses problems carefully, considers alternatives, does not necessarily accept first answer.
	5. Resourceful in seeking ways to solve a problem.
	6. Interested in numbers and quantitative relationships, sees usefulness or applications of mathematics.
	7. Learns math concepts and processes faster than other students.
	8. Good at verbalizing math concepts, processes, and solutions.
	9. Identifies and restates problems, good at formulating hypotheses.
	10. Reasons effectively.
	11. Enjoys trying to solve difficult problems, likes puzzles and logic problems.
	12. Visualizes spatially, can create visual images of problems.
	13. Develops unique associations, uses original methods for solutions.
	14. Sometimes solves problems intuitively, then cannot always explain why the solution is correct.
	15. Recalls relevant information or concepts in solving problems, recognizes the critical elements.

PURDUE ACADEMIC RATING SCALE: SCIENCE

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

Read each item and rate the student according to this scale:

- | | |
|----------------------------|------------------------------|
| 1. Rarely, seldom or never | 3. Quite often or frequently |
| 2. Occasionally, sometimes | 4. Always or almost always |

DK Don't know or have never observed

	1. Good at verbalizing science concepts, makes good oral presentations.
	2. Interested in science books and television programs, enjoys science fiction.
	3. Has science hobbies, is a collector, likes gadgets.
	4. Good at planning, designing, decision-making.
	5. Sees connections, sees relationship of science to real world.
	6. Organizes experiments, capable of separating and controlling variables.
	7. Comes up with good questions or ideas for experiments.
	8. Good at exploring, questioning, investigating, studying things in detail.
	9. Good at visualizing, able to see complex patterns in ideas or dates..
	10. Interested in numerical analysis, good at measurement and data analysis.
	11. Understands scientific method, able to formulate hypotheses and conduct experiments carefully.
	12. Prefers science-related classes and careers.
	13. Persistent, sticks with investigations in spite of difficulties or problems, has high level of energy.
	14. Knows a lot of science information.
	15. Skilful in using lab equipment, able to improvise for experiments.

PURDUE ACADEMIC RATING SCALE: ENGLISH

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

Read each item and rate the student according to this scale:

1. Rarely, seldom or never
2. Occasionally, sometimes
3. Quite often or frequently
4. Always or almost always

DK Don't know or have never observed

	1. Interested in words, definitions, derivations; has an extensive vocabulary.
	2. Sees details, is a good observer, sees relationships, makes connections.
	3. Organizes ideas and sequences well in preparation for speaking or writing.
	4. Has a good sense of humour; uses and understands satire, puns, and second meanings.
	5. Reads widely for a period of time in a variety of types of literature; may focus on one type, then switch and focus on another.
	6. Original and creative; comes up with unique ideas in writing or speaking.
	7. Develops convincing characters and situations in writing.
	8. Withholds judgement while investigating a topic; willing to explore a topic in greater depth than other students, curious.
	9. Recognizes author's or speaker's point of view, mood or intentions.
	10. Elaborates well when speaking or writing, uses vivid expressions which make words "come alive".
	11. Visualizes and translates images into written or spoken forms.
	12. Likes to do independent study and research in areas of interest.
	13. Motivated to write even when writing is not assigned; writes stories, poems, or plays; keeps a journal or diary.
	14. Sees relationship between literature and other art forms.
	15. Uses words effectively in writing descriptions and communicating emotions.

PURDUE ACADEMIC RATING SCALE: SOCIAL STUDIES

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

Read each item and rate the student according to this scale:

- | | |
|----------------------------|------------------------------|
| 1. Rarely, seldom or never | 3. Quite often or frequently |
| 2. Occasionally, sometimes | 4. Always or almost always |

DK Don't know or have never observed

	1. Reads widely on social issues from a variety of books, magazines or newspapers.
	2. Becomes absorbed in the investigation of topics.
	3. Displays intellectual curiosity, becomes interested in a variety of topics not required or assigned.
	4. Skilled in analysing topics, finding the underlying problem, questioning, investigating.
	5. Attracted toward cognitive complexity; enjoys puzzles, paradoxes, mysteries.
	6. Asks questions that are open-ended or philosophical.
	7. Has a wide vocabulary which is used precisely and appropriately.
	8. Enjoys language, reading, conversation, listening, and verbal communication.
	9. Sensitive to social issues, sees ethical and moral questions.
	10. Suspends judgement, entertains alternative explanations or points of view while exploring a question.
	11. Engages in intellectual play; enjoys puns, play on words, language games.
	12. Enjoys the processes of research and investigating for their own sake.
	13. Recalls details about social science topics, makes unusual connections.
	14. Interested in social themes, complex public issues, explanations, and theories of causation.
	15. Curious about many things, "goes off on tangents."

PURDUE ACADEMIC RATING SCALE: FOREIGN LANGUAGE

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

Read each item and rate the student according to this scale:

- | | |
|----------------------------|------------------------------|
| 1. Rarely, seldom or never | 3. Quite often or frequently |
| 2. Occasionally, sometimes | 4. Always or almost always |

DK Don't know or have never observed

	1. Learns new vocabulary words and grammatical concepts rapidly.
	2. Recognizes relationships between words, applies them in usage.
	3. Retains what is seen, heard, or read with minimal reinforcement.
	4. Responds appropriately when spoken to in the foreign language.
	5. Distinguishes and reproduces fine nuances of pronunciation.
	6. Has a good memory for vocabulary.
	7. Combines and organizes words and concepts learned.
	8. Communicates effectively in oral or written forms.
	9. Comprehends easily without translating to English word by word.
	10. Produces sophisticated sentences given the level of language learned.
	11. Uses appropriate intonation in speaking language.
	12. Applies language concepts in a wide variety of situations.
	13. Enjoys using new language skills in writing or speaking.
	14. Shows curiosity and inquisitiveness when introduced to new grammatical or cultural concepts.
	15. Confident in using the new language.

* This scale was originally developed by Barbara Shinovich.

Purdue Vocational Talent Scales²

The four scales of the *Purdue Vocational Talent Scales* are designed for talent identification in secondary vocational classes. An appropriate scale should be completed for each student whom a teacher feels is talented in the particular vocational area. If a student has taken classes from several teachers in an area, each should complete one of the rating scales, and these scores should be averaged for the student.

These scales are based on the assumption that the best way to identify talent is to observe student performance and to make judgements about the quality of the performance. Teachers are urged to recall specific instances of behaviours which are relevant to each rating item. In the absence of behavioural evidence the teacher should rate the items as uncertain.

Each student who is nominated and rated by one or more teachers should rate him or herself with the same scale, and the self-rating should be included in the packet of talent identification material for the student.

Students who score 50 points or higher as rated by one teacher or as an average among two or more teachers should be selected for assignment to the school's talent pool. For each such identified student a growth plan should be prepared by a committee of vocational teachers suggesting appropriate future classes for the student, other in-school activities, out-of-school projects and activities, and special activities or adaptations which should be made in teaching the student in vocational classes.

These procedures for identification of vocationally talented youth and instructional activities which are provided for them should all be viewed as a part of the school's total gifted and talented program. This will be detailed in Chapters Four and Five. These scales are based on systematic research in which vocational teacher' judgements and information from literature reviews were combined to write scale items. Vocational teachers then reviewed all items and judged their appropriateness and clarity. The results are presented in the thesis of Koopmans-Dayton (1986, Purdue University), and in a technical report in the *Career Development Quarterly* (1989).

² Feldhusen, J. F., Hoover, S. M., & Sayler, M. F. (1990). *Identifying and educating gifted students at the secondary level*. Unionville, New York: Trillium Press. (Ch. 3, pp. 12-16)

VOCATIONAL AGRICULTURE TALENT IDENTIFICATION SCALE

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

G.P.A. IN AGRICULTURE CLASSES: _____

TOTAL SCORE ON THE SCALE: _____

Read each statement and rate the student according to the following scale:

5 Strongly Agree 3 Uncertain 1 Strongly Disagree
 4 Agree 2 Disagree

	1. Shows good mechanical skill in use of tools and equipment.
	2. Shows creativity in adapting or modifying designs or plans when necessary.
	3. Is able to stick with a project and see it through to completion.
	4. Shows interest in new techniques and methods.
	5. Exhibits leadership in shop activities/organizations.
	6. Is able to develop the design for a project.
	7. Asks appropriate or insightful questions to clarify a task or project.
	8. Comes up with good, high-level ideas for a project or for agricultural problems.
	9. Is viewed by other students as showing talents in agriculture classes.
	10. Learns and applies new skills, techniques, or procedures rapidly and easily.
	11. Makes good judgements or evaluations.
	12. Is able to present ideas about a project clearly and effectively.
	13. Understands new ideas and concepts quickly and easily.
	14. Seems to have a lot of ideas.
	15. Is enthusiastic in all or most class activities.

BUSINESS AND OFFICE TALENT IDENTIFICATION SCALE

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

G.P.A. IN BUSINESS AND OFFICE CLASSES: _____

TOTAL SCORE ON THE SCALE: _____

Read each statement and rate the student according to the following scale:

5 Strongly Agree 3 Uncertain 1 Strongly Disagree
 4 Agree 2 Disagree

	1. Shows good skill in organizing data and information.
	2. Shows creativity in solving problems or designing reports.
	3. Is able to stick with a project and see it through to completion.
	4. Shows interest in new material, new procedures, new projects.
	5. Exhibits leadership in class activities/organizations.
	6. Is able to develop a design for a project.
	7. Asks appropriate or insightful questions to clarify a task or project.
	8. Comes up with good, high-level ideas for a project.
	9. Is viewed by other students as showing talent in business and office classes.
	10. Learns and applies new skills, techniques, or procedures rapidly and easily.
	11. Makes good judgements or evaluations.
	12. Is able to present ideas about a problem or project clearly and effectively.
	13. Understands new ideas and concepts quickly and easily.
	14. Seems to have a lot of ideas.
	15. Is enthusiastic in all or most class activities.

HOME ECONOMICS TALENT IDENTIFICATION SCALE

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

G.P.A. IN HOME ECONOMICS CLASSES: _____

TOTAL SCORE ON THE SCALE: _____

Read each statement and rate the student according to the following scale:

5 Strongly Agree 3 Uncertain 1 Strongly Disagree
 4 Agree 2 Disagree

	1. Shows good manual skills in use of tools and equipment/materials.
	2. Shows creativity in adapting or modifying designs or plans when necessary.
	3. Is able to stick with a project and see it through to completion.
	4. Shows interest in new techniques and methods.
	5. Exhibits leadership in group projects/organizations.
	6. Is able to develop a design for a project.
	7. Asks appropriate or insightful questions to clarify a task or project.
	8. Comes up with good, high-level ideas for a project or for procedures in sewing and cooking.
	9. Is viewed by other students as showing talents in home economics classes.
	10. Learns and applies new skills, techniques, or methods rapidly and easily.
	11. Makes good judgements or evaluations.
	12. Is able to present ideas about a project clearly and effectively.
	13. Understands new ideas and concepts quickly and easily.
	14. Seems to have a lot of ideas.
	15. Is enthusiastic in all or most class activities.

TRADE AND INDUSTRIAL TALENT IDENTIFICATION SCALE

STUDENT: _____

GRADE: _____ DATE: _____

TEACHER: _____ SCHOOL: _____

G.P.A. IN TRADE AND INDUSTRIAL CLASSES: _____

TOTAL SCORE ON THE SCALE: _____

Read each statement and rate the student according to the following scale:

5 Strongly Agree 3 Uncertain 1 Strongly Disagree
 4 Agree 2 Disagree

	1. Shows good mechanical skill in use of tools and equipment.
	2. Shows creativity in adapting or modifying designs or plans when necessary.
	3. Is able to stick with a project and see it through to completion.
	4. Shows interest in new techniques and methods.
	5. Exhibits leadership in shop activities/organizations.
	6. Is able to develop the design for a project.
	7. Asks appropriate or insightful questions to clarify a task or project.
	8. Comes up with good, high-level ideas for a project or for shop procedures.
	9. Is viewed by other students as showing talents in trade and industrial classes.
	10. Learns and applies new skills, techniques, or procedures rapidly and easily.
	11. Makes good judgements or evaluations.
	12. Is able to present ideas about a project clearly and effectively.
	13. Understands new ideas and concepts quickly and easily.
	14. Seems to have a lot of ideas.
	15. Is enthusiastic in all or most class activities.