

Appendix 1. Variable Categories, Definitions, and Study Examples

Category	Definition	Example
Ability ^{2,9,10}	Talent, skill, or proficiency in an area; smart, skilled, ability, genius, brilliant, bright, brain, aptitude, gift, capacity, propensity, innate, flair, knack, clever, expert, proficient, capable, adept, able, competent, natural, inherent, instinct, creative, insight, analytical, intelligent, talented	<i>“_ is exceptionally bright and was able to learn difficult new concepts very quickly”; “demonstrated early on an uncanny ability to be self-starter”</i>
Academic background ²	Formal preparation prior to medical school – high school, undergraduate and graduate schools	<i>“attended _ University... where _ was Phi Beta Kappa and summa cum laude”; “after graduating valedictorian from _ high school”</i>
Achievement ^{2,10}	Successful effort; organized, performed, earned	<i>“has been the top of _ class every step of the way”; “has also been successful in _ research efforts with several _ faculty”</i>
Agency ^{2,3}	Drive to perform, achieve status; confident, ambitious, competitive, assertive, independent, decisive, aggressive, dominant, forceful, daring, outspoken, intellectual	<i>“was noted to be a go-getter on rounds”; “_ is assertive”; “_ commands a presence in the OR and clinic”; “_ is confident”</i>
Athletics	Mention of participation in athletics	<i>“a former track and field star”; “member of the Division 1 Varsity Lacrosse Team”</i>
Authority established ²	Letter writer outlines their qualifications	<i>“I serve as the Chairmen of the Department of Orthopaedics and residency program director”</i>

Awards ²	Mark of recognition, scholarships, Alpha Omega Alpha Honor Medical Society membership	<i>“received multiple awards and scholarships in engineering while also receiving a research grant”; “elected to the Gold Humanism Honor Society”</i>
Career choice ²	Surgical subspecialty, academic surgery	<i>“_ is interested in academic surgery”</i>
Clinical skills ^{2,11}	Observable act within patient care; physical exam, diagnostic, communication, rounding, reading images	<i>“able to gather and present patient information in an organized and efficient manner”;</i>
Communal ^{2,3}	Modest, cooperative, helpful, kind, sympathetic, sensitive, nurturing, affectionate, agreeable, tactful, interpersonal, warm, caring	<i>“modest and quiet”; “affable, helpful”; “interpersonal style puts people at ease”; “sympathetic”; “_ strikes me as someone who would make a terrific caregiver”</i>
Community service ²	Volunteer work to help others	<i>“still found time to volunteer for a number of worthy causes”</i>
Doubt raiser ^{2,4}	Negative language, hesitancy, hedges, faint praise, irrelevancies; not complementary or supportive of candidate.	<i>“overall performance within this group was below average”; “fund of knowledge was below average”</i>
Family ²	Mention of spouse, children, parents	<i>“uses _free time to spend with _ wife”</i>
Fit ²	Discussion of good fit for a particular residency program or orthopaedic surgery in general	<i>“_ would be a good fit here”; “fit in exceptionally well with other members of the team”</i>
Fund of knowledge ^{2,11}	Information, clinical knowledge, fund of knowledge	<i>“knowledge base was described as being above average for her year in training”; “demonstrated a strong fund of knowledge”</i>
Future promise ²	Future potential as a surgeon	<i>“I have no doubt _ will not only be an excellent orthopaedic resident and surgeon, but also a leader in our field.” “I know will be a fantastic addition to the field of orthopaedic surgery”</i>

Grindstone ^{2,9,10}	Hard working, conscientious, dependable, meticulous, thorough, diligent, dedicated, careful, reliable, effort, assiduous, trust, responsible, methodical, industrious, busy, work, persist, organized, disciplined	<i>“hard working”; “ability to persist through adversity”; “I have been impressed with _ diligence”</i>
Hardship ²	Difficult time or adversity applicant faced	<i>“one would never know the hardships of _ childhood and tragedies”; “had an extremely challenging upbringing”</i>
Initiative ²	Assess and undertake independently – could be a clinical task or research project; conceived/enacted by applicant	<i>“independently ordered appropriate x-rays/tests”; “was very proactive in getting splints ready”</i>
Judgment ^{2,11}	Ability to make considered decisions or come to sensible conclusions	<i>“_ has appropriate medical judgment to make decisions”; “_ judgment is sound and _ can be trusted to make wise decisions”</i>
Leadership ²	Leading or guiding a group; president/officer of organization	<i>“involved in numerous teaching and leadership positions”; “co-president of the American Medical Women’s Association”; “is a born leader”</i>
Legacy ²	Applicants’ parents are physicians/surgeons	<i>“has strong family, personal ties and connections to athletics and sports medicine”; _ “father is a community orthopaedic surgeon”</i>
Personality traits ^{2,11}	Patterns of thoughts, feelings, behaviors - introversion, extroversion, openness, conscientiousness	<i>“I found _ to be an extremely likeable young man with a wonderful personality and a delightful, softspoken sense of humor”</i>
Physical description ²	Defining traits of the applicant’s body, ie hair color, height, weight, smile	<i>“_ has a great smile”; “always neat and proper in _ dress and appearance”</i>
Positive but general terms ²	General affirmations; good, eager, enthusiastic, happy, delightful, helpful	<i>“had a pleasant attitude, was easy to work with”; “energetic, enthusiastic”</i>
Presentations ²	Presenting a topic locally or nationally	<i>“a first author podium presentation at the American Academy of Orthopaedic Surgeons Meeting”; “at the end of the rotation, _ gave a very good</i>

		<i>presentation on olecranon fractures”</i>
Receptive to feedback ²	Open to critique, criticism, feedback	<i>“welcomed feedback and incorporated this into _ daily practice”</i>
Recruitment ² / ranked highly	Mention of wanting to retain applicant at home institution; ranked highly; ranked to match	<i>“I hope I can recruit _ to stay here”; “will be actively recruiting _ to stay in our program”; “_ will be ranked to match here”</i>
Research ^{2,9,10}	Study, studies, project, research, fund, science, data, experiment, test, result, finding, publication, publish, vita, method, grant, manuscript, journal, theory, discovery, contribution, science	<i>“research has led to one publication and one presentation”; “has been involved in research with two high level peer review articles (JBJS and JHS)”</i>
Scholarship ²	GPA, USMLE Step scores, Honors	<i>“scoring in the 260’s on both Step 1 and Step 2” “Has Honors in essentially ALL of rotations”</i>
Standout adjectives ^{2,9,10} / superlatives ²	Notable, remarkably superior; excellent, superb, outstanding, unique, exceptional, unparalleled, most, wonderful, terrific, fabulous, magnificent, remarkable, extraordinary, amazing, supreme, fantastic	<i>“is an outstanding applicant”; “is felt to be an excellent student”</i>
Strong support	Stating strong support or recommendation	<i>“I give _ my highest recommendation”; “strongest support”; “recommend strongly without reservation”</i>
Teaching ^{2,9,10} /mentoring ²	Teaching, education, training, instruct, supervise, lecture, mentor, adviser, class, counselor, syllabus, course, colleague, citizen, student,	<i>“mentors numerous other medical students”; “was also involved in numerous teaching and leadership positions”</i>
Team work ²	Worked a team; team player, team work	<i>“demonstrated that _ is a true team player”; “demonstrated exceptional team work”</i>
Technical skills ^{2,11}	Surgical skills, hand-eye coordination, dexterity	<i>“ability to handle soft tissues and perform wound closure was well above _ peers” “technical skills are excellent, far above that expected of a medical student”</i>

Top student	Named to be in the top 10% or less of students; named be a top student; named to be the best or one of the best students	<i>“top 1% of students I have mentored over a 15 year career”;</i> <i>“best student rotator”</i>
Work habit ^{2,11} /work ethic ²	Behavioral, ethical, and practical elements applied by employees in contributing to job performance; sets a precedence of efficiency, productivity and reliability.	<i>“showed strong work ethic”</i>