Granello, D. H. (2001). Promoting cognitive complexity in graduate written work: Using Bloom's Taxonomy as a pedagogical tool to improve literature reviews. Counselor Education and Supervision, 40(4), 292-307.

	Knowledge	Comprehension	Application
Skills Used	• Repeat information from other sources	• Summarize main points of the articles reviewed	• Select main ideas and research finding from others that relate directly or indirectly to the topic • Make explicit links between source articles and current paper

Assumptions Made by the Writer	• If it has been published, it is worthy of inclusion
	• All published articles are equally valid
	• No true distinctions between research and non-research articles
	• Main ideas are not distinguished from lesser ideas. Therefore, the information included from other authors is not necessarily the main points from their writings
		• Many of the same assumptions as a student using the knowledge domain, e.g.:
		  • if it has been published, it is worthy of inclusion
		  • all published articles are equally valid
		  • no true distinctions between research and non-research articles
			• Many of the same assumptions as a student using the knowledge domain, particularly regarding lack of evaluation of the relative merit of publications
			• Belief that selecting main ideas from articles related to the topic and making explicit connections to the current paper is sufficient

Main Organization and Content of Papers at Each Level	• Organized by articles read, rather than topic • Simply a listing of what others have found with no summative comments, no integration • Information contained is not necessarily based on main ideas of source articles • Over-use of quotations from others; unable to capture main ideas in own words	• Able to distinguish main ideas of the articles reviewed. Therefore, while the organization of the paper may be similar to a student at the "knowledge" domain, the content will be based on main ideas from source articles, not just a recitation of all they have read.	• The paper is still organized by source articles, rather than topics or themes. • With each article reviewed, there is a direct and explicit link from the source article to the current paper (e.g., "Therefore, the findings of Smith and Jones support the premise that differences in age between the counselor and client can affect the counseling relationship.")
Tips to Move to Next Level	• As each article is read, before beginning to write, summarize main ideas from each article *in own words* on notecards	• At the end of each summary, develop an explicit and direct link from the source article to the paper being written • For each summary, ask "how does this relate to my topic?" If it doesn't, or the relationship is strained, then exclude it from the paper	• Add to the summaries all the details that are necessary to make decisions about the merit of the source article • Develop a list of questions that can be asked of every source article to determine essential components • Assess internal and external validity and conclusions are based on findings

	Analysis	Synthesis	Evaluation
Skills Used	• Identify the component parts of a research or literature article • Identify patterns or themes in the articles reviewed • Use data and information from others to support current paper's ideas	• Integrate and combine ideas from source articles into a new whole • Draw together ideas into a thematically written research review	• Able to make distinctions about the quality of source articles, based on objectively defined criteria
Assumptions Made by the Writer	• Same lack of evaluation as students at lower levels • Focus on the details and component parts, rather than the bigger picture ideas of how these findings are inter-related	• Lack of evaluative schema for source articles. Tend to include information that supports premise of current paper and exclude that which does not • Difficulty developing over-arching themes when data is in conflict • Unable to make objective determinations of what to do when source articles are in conflict	• Not applicable
Main Organization and Content of Papers at Each Level	• Each article is directly and explicitly linked to the topic of the current paper by identification of the specific components of the source article that are relevant • The findings from the source articles are not linked to each other	• The paper is organized thematically, rather than by source articles • Main ideas are presented, and source material that supports and questions those ideas is discussed • At the end of each major theme, a discussion of the results from the source articles is included, but this discussion still does not include a systematic objective evaluation	• Thematically organized paper • Source articles are analyzed and critiques based on strengths and limitations • When findings are in conflict, this conflict is acknowledged. Whenever possible, the quality of the source articles is discussed, particularly when research of differing merit produces contradictory results • Both sides of an argument are presented, with minimal researcher bias
Tips to Move to Next Level	• Review all source materials thoroughly, develop summaries with detailed information. From these summaries, develop a comprehensive and detailed, thematically-based outline *before* beginning to write the paper	• Determine beforehand what constitutes a strong versus weak source article • Use information gleaned from research methods courses to determine methodological soundness of research and results of source articles	• Not applicable