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**PERCEPTION OF COLLEGE INSTRUCTOR EXPERTISE: AN EXPLORATORY
QUALITATIVE STUDY**

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Abstract

This exploratory qualitative research study investigates the cues used in the perception of expertise of college instructors by 70 college students in two south Florida private colleges. In the study, subjects responded to an open-ended question in which they identified factors that would qualify an instructor as an 'expert instructor'. Factors included respectively instructor's knowledge, social skills, knowledge transfer, experience, classroom climate, education, respect, and personality. These findings are then compared with both previous research findings on expertise of primary and secondary school teachers and with findings in the managerial literature on expertise (Germain, 2005; Subramini, Peddibhotla, and Curley, 2004). Recommendations for future research and contributions to the field are provided.

Keywords: College instruction; expertise; private colleges; students' perception;

Objectives of the Study

The ability to assess the expertise of employees is an important component of successful collaborative knowledge work. The focus of the organizational literature has largely been on the issues of locating individuals with relevant expertise and transferring their knowledge to others (e.g., Hansen, 1999; Szulanski, 1996). In the decision literature, the focus has been upon conceptualizing expert performance (e.g. Shanteau, Weiss, Thomas, & Pounds, 2002) and the nexus between expertise and outcomes (e.g., Camerer & Johnson, 1991). These studies provide greater understanding of expertise. While most of the existing literature on expertise in the field of science of education in the last decade has focused on 'instructors', few researchers have addressed the question of the assessment of instructor expertise by college students and a fundamental question remains unexamined: how do college students identify instructors' expertise? This question is the main objective of our study. Findings on perception of college instructor expertise could fill the gap between managerial expertise and the expertise of primary and secondary teachers. In other words, we hypothesize that because higher education can be seen as a link between school and work and addresses an ever older student population, students'

perception of higher education educators' expertise will contain variables that encompass both the role of a manager and the role of a teacher. Variables such as morality in the classroom, so important to teacher's expertise, will not be perceived as essential for college students to define college instructors' expertise as will be the instructor's level of education or years of experience. We expect to find dimensions of teacher expertise such as use of knowledge, classroom climate, sensitivity to context, passion for teaching and learning, and respect for students (Bond et al., 2000). We also expect to find dimensions of manager expertise such as education and years of experience in the job (teaching). This study is important to better understand students' expectations and achievement in higher education (Germain & Scandura, 2005).

Theoretical Framework

The concept of expertise has been the subject of intense debate in the literature and there is considerable variation in both the definition of the word expertise itself, and in the way expertise is viewed (e.g. Dreyfus & Dreyfus, 1998). For the purpose of this paper, we will draw on the definition of expertise by Frensch and Sternberg (1989) as an ability acquired by practice to perform qualitatively well in a particular task domain. In the education field, research on expertise has been supported by many research centers, including the Centre for the Study of Expertise in Teaching and Learning (CSETL), a nonprofit centre that seeks to identify, package and disseminate teaching expertise. The study of expertise in teaching, as a defined endeavor, is a relatively recent line of inquiry and has been described well by Berliner (1986). The literature in science education mainly focuses on case studies of 'exemplary' teachers (Bradford, 1999; Tobin & Fraser, 1988), and on instructors in elementary and secondary schools (cf. Darling-Hammond & Ball, 1997; Geelan, 2003; Hatch, White, & Faigenbaum, 2005; Smith & Strahan, 2004; Varrella, 2000). Employing the general model of Dreyfus & Dreyfus (1986), Berliner

(1988) views the development of expertise in pedagogy as a series of five stages or levels of skill development: novice, advanced beginner, competent, proficient, and expert. He refers to Dreyfus and Dreyfus's thinking about the novice-to-expert continuum as "stage theory". He hypothesizes that novices are generally student and first-year teachers and individuals. They achieve the abilities of an advanced beginner in the second or third year of teaching. With "talent and motivation", they will reach the competent level by the third or fourth year. Proficiency may be achieved by the fifth year, and a subset of those proficient teachers will eventually reach the level of expert. But what exactly defines 'teacher expertise'? According to Darling-Hammond and Ball (1997), teacher expertise involves having a deep understanding of both content and students. This shapes how wisely teachers select from texts and other material in class, and how skillfully they assess students' progress. Kohn (1996) considers everything from furniture to the instructors' voice to the climate around the school grounds as either "good signs" or "possible reasons for concern". The most expert instructors, he asserts, tend to establish a "working with" (as opposed to controlling) tone and climate in the classroom. Students are active in experiential inquiries and problem-solving events. In terms of teaching habits, expert instructors go beyond the textbook, they make a good use of time, they are patient, use varied and contextual assessments of students understanding, and are committed to their own ever-growing understanding of the subject taught (Varrella, 2000). As Hatch et al. (2005) note, expert teachers build their expertise, credibility, and influence by engaging in personal and public inquiries, deepening their understanding, and gaining the confidence that they have something worthwhile to say. Furthermore, as measured by the standards-based evaluation, teacher expertise has shown to be positively associated with student achievement. Indeed, Darling-Hammond and Ball's study (1997) shows that the percent of influence on test score change can be as high as 40%

attributed to teacher qualifications (degrees, experience, and expertise). Also, the large achievement gap between black and white students is almost entirely accounted for by the qualifications of their instructors. Conventional wisdom holds that teacher's expertise—their knowledge of a subject matter, child development, curriculum, and teaching experience— affects their practice (Jeffers & Fong, 2000). Smith and Strahan's study (2004) involve an investigation of three individual experts; analysis of the collective case yielded six central tendencies across participants and supported by previous research: a sense of confidence in themselves and in their profession; they talk about their classrooms as communities of learners; they maximize the importance of developing relationships with students; they demonstrate a student-centered approach to instruction; they make contributions to the teaching profession through leadership and service, and they show evidence that they are masters of their content areas. Bond, Jaeger, Smith, & Hattie (2000) conducted a meta-analysis of over 200,000 research studies on teacher expertise. They identified the following 'dimensions of teacher expertise'—characteristics of accomplished, experienced teachers: use of knowledge, deep representation, problem solving, improvisation, classroom climate, multidimensional perception, sensitivity to context, monitoring learning and providing feedback, test hypotheses, passion for teaching and learning, respect for students, challenge, and deep understanding. These dimensions are heuristically useful in drawing attention to particular facets of the complex activity of teaching. Additionally, as Rozycki (1992) points out, instructors shall also be ethical to be experts. It seems that the concept of expertise for instructors has a broader definition than the one for managers.

Research Methods

As previously stated, the purpose of this study is to explore the factors put forth by undergraduate students' as qualifiers of instructor expertise in college. This is important because

perception of expertise (or the lack of) may lead to greater or lower relationship development, including respect (Graen & Uhl-Bien, 1995) and to a better understanding of students' expectations of their academic experience (Germain & Scandura, 2005). We used a descriptive, qualitative, exploratory approach. The researcher chose a purposeful sampling procedure. For the purpose of this study, an instructor is defined as a person who teaches courses in a 4-year or 6-year college. Participants in this study (graduate and undergraduate college students from two private 4-year and 6-year universities in the southeast region of the United States) were presented with a questionnaire at the beginning or at the end of a class time, either in the morning or in the night session. The question was asked in an open-ended format. Frequencies tables were computed, and since our data were categorical, chi-square tests were calculated between variables the researcher believed could provide insights, i.e. examine the potential associations between the student demographics and the factors of college instructor expertise identified by the participants.

Results

A total of 70 subjects responded to our questionnaire. 75.4% were females and 24.6% were males. The majority of respondents were Black (40.6%), then Hispanic (34.8%), then White-Caucasian (14.5%). 58.8 % were undergraduate students and 41.2 % were graduate students. Of the 70 students, 81.4% were employed and the majority (46.9%) worked more than 40 hours per week in either a supervisory position (58.3%) or a clerical position (29.2%). The majority of the participants (30.4%) ranged between the ages of 18 and 25, 26.1% between the ages of 26 and 35, 23.2% between the ages of 36 and 45, and 18.8% between the age of 46 and 55.

The researcher began her analysis of the results by reading each through to gain an overall sense of the entire results and then reading the transcripts again to note major themes and trends. More

specifically, a conceptual content analysis approach was used (Krippendorff, 1980; Smith, 2000). Therefore, he/she began to establish the existence and frequency of concepts in the respondents' responses. An initial set of 19 factors was identified. After uniting synonymous factors, the number of factors was then reduced and categorized into 12 distinct categories: Knowledge, Education, Social Skills, Teaching Methods, Experience, Ethics, Coaching, Course Preparation, Knowledge Transfer, Class Climate, Personality, and Respect. The researcher then wrote out his/her understanding of the themes and ideas implicit in the answers. He/she then obtained inter-subject agreement (Lincoln & Guda, 1981) by asking three independent reviewers to code the data, thus reducing bias, confirming results and validating the themes. The independent reviewers pruned the items by combining equivalent factors and by removing factors that were only mentioned by three or less participants. This reduced the number of categories to eight: Knowledge, Social Skills, Knowledge Transfer, Experience, Classroom climate, Education, Respect, and Personality (see Table 3). The most frequently cited of the original 12 items identifying instructor expertise are: knowledge (cited by 51.4% of all students); Communication Skills (37.1%); Can transfer knowledge/explain (35.7%); Has real-life experience in topic taught (27.1%); Class climate (can motivate class / has discussions) (24.3%); Instructor level of education (17.1%); Uses examples/illustrations to reinforce teaching (17.1%); Can answer questions (15.9%); Respects students' opinions (15.7%); Years experience teaching (15.7%); Instructor is enthusiastic, fun and entertaining (11.4%); and Instructor coaches/provides help (11.4%).

Since our data were nominal, chi-squares were calculated to evaluate whether the observed frequencies of students in one category versus another are significantly different from the frequencies expected on the basis of either chance or a theory's prediction.

A chi-square test was calculated between student level (graduate / undergraduate) and the importance of college instructor knowledge of subject taught for consideration for expertise: $\chi^2(1, N=70) = 1.11, p = .2$, which is not significant. There does not seem to be any association between knowledge of instructor and students level (undergraduates or graduates). Table 1 shows a chi-square test of student level and the need for college instructors to coach and provide help to students to be perceived as experts. $\chi^2(1, N=68) = 4.56, p = .03$. Here, the result is significant: There is an association between student level and the existence of coaching from an instructor. Typically, the literature shows that undergraduate students need (and expect) help and coaching from instructors more than graduate students do (Germain & Scandura, 2005). Also, there is no association between students who are employed or non-employed and the perception of real life experience of instructors as a sign of instructor expertise. Similarly, there is no association between student level and real life experience as a sign of instructor expertise.

Table 1 - Chi-Square test of student level (graduate and understand) and the need for college instructor to coach and provide help to students to be perceived as an expert.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.347 ^b	1	.012		
Continuity Correction ^a	4.566	1	.033		
Likelihood Ratio	9.228	1	.002		
Fisher's Exact Test				.017	.010
Linear-by-Linear Association	6.253	1	.012		
N of Valid Cases	68				

a. Computed only for a 2x2 table

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.29.

Table 2 shows, however, that there is an association between student level and the importance attached to the number of years the instructor has been teaching as a factor of perceived

expertise: $\chi^2 (1, N=68) = 5.53, p < .01$ which is in par with the chi-square result of highest level attained by students and the perception of instructors with more years of teaching experience as a sign of expertise: $\chi^2 (3, N=69) = 10.1, p < .01$. Also, there is an association between the student level and the faculty level of education: $\chi^2 (1, N=68) = 5.29, p = .02$. It is expected that graduate students perceive a more educated instructor (having a Master's degree versus a Ph.D., for instance) as a factor for greater expertise since they are more educated themselves. Furthermore, there is no association between graduate and undergraduate students and the need for good explanations, the ability to explain and the transfer of information by college instructors as the chi-square test did not show any significant difference between the groups: $\chi^2 (1, N=68) = .25, p = .61$. Finally, there is no association between student level and the perception of instructors who are entertaining, outgoing, and enthusiastic as a factor for expertise: $\chi^2 (1, N=68) = 1.7, p < .2$. This finding is supported by both the famous Dr. Fox Experiment (Jackson, Teal, Raines, Nansel, Force, & Burdsal, 1999) and by the research of Germain and Scandura (2005).

Table 2 - Chi-Square test of student level and the importance of instructor's years of experience instruction as perception of expertise.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.296 ^b	1	.007		
Continuity Correction ^a	5.538	1	.019		
Likelihood Ratio	7.406	1	.007		
Fisher's Exact Test				.012	.009
Linear-by-Linear Association	7.188	1	.007		
N of Valid Cases	68				

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.12.

The factors of expertise that emerged from our research only partially mirror some of the findings in the managerial expertise research studies conducted by Subramini et al. (2004) and by Germain (2005). Subramini and colleagues' research findings concur to some degree as some of the participants in their study viewed formal training (education) as less important than experience.

Our findings also differ from the ones found in the teacher expertise literature. The factors in common between teacher expertise and college instructor expertise are: knowledge, classroom climate, and respect for the students. However, many of the factors found in our study are also found in the human resource development arena, which studies the concept of managerial expertise. Indeed, the common factors between college instructor expertise and managerial expertise are education, social skills, and experience. Note that both the primary and secondary school teacher and the college instructor's perception of expertise taps into the empathic and the social skills dimensions of emotional intelligence, an assortment of noncognitive skills, capabilities, and competencies that influence a person's ability to succeed in coping with environmental demands and pressures (Goleman, 1995). Table 3 summarizes the similarities and differences between our findings and the ones from managerial expertise (Germain, 2005; Germain 2006a; Germain 2006b) and from the primary/secondary teacher expertise (Bond et al., 2000).

Discussion and Educational Importance of the Study

While sharing a few characteristics with the literature on expertise in the management field, the literature on instructor expertise seems to add human qualities, and so do our findings at the college level. Our hypothesis that the perception of college instructor expertise differs from both the teacher (in elementary and secondary schools) and the managerial expertise is confirmed.

Indeed, it seems to borrow from both: it takes the knowledge, classroom climate, and respect for students' components from the teacher expertise, and the components of education, social skills, and experience found in the managerial expertise literature. Clearly, college students seem to perceive professors' expertise as having several characteristics of expert managers with a zest of pedagogical qualities (can explain clearly, can answer questions, and so on). However, the ranking of these categories in terms of importance (based on the number of comments given by the participants) is significantly changed between all three types of expertise (see Table 3). However, a major limitation of previous research on teacher expertise is that it was guided by researchers themselves. In other words, the dimensions of teacher expertise were developed by superiors evaluating instructors, and not by students like in our study.

The existing body of literature on the concept of expertise mainly focuses on its characteristics and on the ways to retain it. With distributed expertise and the increasing use of teams (including team teaching) to address organizational and educational problems, source knowledge has increasingly become an important organizational resource in both corporate and educational institutions. Our research has significant implications for educational practice and for the field of science education. Nowadays universities use databases of experts for internal use. They have also developed sophisticated faculty evaluation tools to assign ratings to instructors (Germain & Scandura, 2005), and the assessment of their expertise, be it in disguised ways, is no exception. The results of this research complement and validate these expertise assessment methods as well as bring additional insights into college students' needs and expectations.

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Appendix

Qualifiers of College Instructor Expertise	Dimensions of Teacher Expertise Bond, Jaeger, Smith, & Hattie (2000)	Identifiers of Managerial Expertise (Germain, 2005)
<p>Knowledge</p> <ol style="list-style-type: none"> 1- Knowledge of subject taught 2- Can answer questions <p>Social Skills</p> <ol style="list-style-type: none"> 1- Can communicate well 2- Can reach students 3- Is accessible / Approachable <p>Knowledge Transfer</p> <ol style="list-style-type: none"> 1- Can transfer knowledge 2- Can explain clearly <p>Experience</p> <ol style="list-style-type: none"> 1- Experience teaching the topic 2- Experience in the field / real life experience 3- Uses examples to illustrate the course <p>Classroom climate</p> <ol style="list-style-type: none"> 1- Can engage student participation 2- Can motivate students <p>Education</p> <ol style="list-style-type: none"> 1- Degree obtained 2- If degree concords with the subject taught <p>Respect</p> <ol style="list-style-type: none"> 1- Instructor’s respect of varied opinions 2- Respect towards students <p>Personality</p> <ol style="list-style-type: none"> 1- Is enthusiastic / outgoing / entertaining 2- Is interested in topic 3- Patient 4- Flexible 	<p>Use of knowledge</p> <p>Deep representation</p> <p>Problem solving</p> <p>Improvisation</p> <p>Classroom climate</p> <p>Multidimensional perception</p> <p>Sensitivity to context</p> <p>Monitoring learning / providing feedback</p> <p>Test hypotheses</p> <p>Passion for teaching & learning</p> <p>Respect for students</p> <p>Challenge</p> <p>Deep understanding</p>	<p>Education</p> <ol style="list-style-type: none"> 1. Academic training 2. Needed skills 3. Training related to the project / Certifications 4. Résumé <p>Experience</p> <ol style="list-style-type: none"> 1. Experience in the field 2. Demonstration of expertise and success in a similar project 3. Past behavior and knowledge 4. Amount of time spent at the job <p>Performance</p> <ol style="list-style-type: none"> 1. Former performance evaluations 2. Quality of past and current work <p>Recommendations</p> <ol style="list-style-type: none"> 1. Peer recommendations 2. Recommendations from former and current managers 3. Contact previous employers <p>Written Evidence</p> <ol style="list-style-type: none"> 1. Public publications 2. Has peer-reviewed publications in the area of expertise <p>Social Skills</p> <ol style="list-style-type: none"> 1. People skills 2. Teamwork ability 3. Communication skills