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Critical thinking during a time of critical change in media industries: Examining media students' perception and appreciation of higher-level learning outcomes

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### Abstract

The mass communication industries continue to undergo a period of uncertainty and rapid change. The time of change has reached universities as mass communication programs across the nation seek ways to adjust their curricula to include fast-changing technological skills demanded by the industry. During this time of change on both the professional and academic levels, this study uses Bloom's taxonomy to examine media students' perceptions of higher-level, analytical knowledge in regard to their coursework and future employment prospects. Scholars in several fields have argued universities must do more than provide students with the skills they need to get their first job. Instead, scholars argue students must know *why* they do the job, not simply *how* to do the work. Using a comparative analysis of students in a core, entry-level mass communication course and their more advanced counterparts in a senior-level media law class, this study found students have generally favorable views regarding higher-level learning outcomes. It also showed little evidence that students' value and perception of learning analytical-level knowledge change between the time they enter mass communication programs and when they graduate.

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A growing set of higher education literature supports the need for college students to garner analytical-level knowledge from their course work (Bourland-Davis, 1998; Athanassiou, McNett & Harvey, 2003; Jones, Harland, Reid, & Bartlett, 2009). Scholars argue the uncertain and changing employment landscape, within the communication fields and without (Carpenter, 2009), demands that new graduates be capable of and willing to use higher-level understandings of the world around them to evolve and adapt (Wick & Phillips, 2008). Such calls for higher-level learning are especially applicable in the mass communication fields, where new technologies have caused great uncertainty about the skills, norms, and practices needed to succeed (Lowery & Gade, 2011). At the same time, mass communication programs are focusing on skills-based learning as they work to revise their curricula to account for the widening array of technological competencies employers seek from recent graduates (Carpenter, 2009).

By using terms such as “conceptual” and “analytical” knowledge, this study refers to levels presented by Bloom’s taxonomy (Bloom, 1956; Halawi, McCarthy, & Pires, 2009). The taxonomy outlines six levels of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation. The taxonomy is generally illustrated in the form of a pyramid (“Center for Academic Success,” 2011). The vast, technology-induced changes occurring in mass communication industries, such as journalism, public relations, and advertising, coupled with the resulting shifts taking place in university mass communication programs make examining students’ perceptions of different types of knowledge valuable (Carpenter, 2009; Lowery & Gade, 2011). According to the literature, students who cannot continue learning after they finish their degrees will struggle in the

communication fields (Wick & Phillips, 2008). Many studies in other fields, such as business, management, and biology, have used Bloom's taxonomy to consider similar questions (Athanassiou, McNett & Harvey, 2003; Halawi, McCarthy, & Pires, 2009; Armbruster, P., Patel, M., Johnson, E., & Weiss, M., 2009). Bloom's taxonomy has been used in media-related studies, but not to measure student perceptions and values of learning levels. This study helps add to what is known regarding the extent to which undergraduates value higher-level, analytical learning and how these higher learning outcomes progress during students' time in mass communication programs.

This study examines Bloom's taxonomy and surrounding learning-level literature both from within and without mass communication sources. It also outlines applicable research regarding changes in the mass communication fields. Using a comparative student survey, concepts from the literature are operationalized into variables and measured between two groups of students: Entry-level mass communication students in a core writing course and senior-level students in a universally required media law class. The survey includes nearly 200 hundred students from the two courses, which are offered at a large, public university located in the Midwest. The final sections of the paper provide the survey results and discussion.

### **Change, Challenges, and Mass Communication Curriculums**

University media programs have a long, historical link to their constituent professions (George, 2011). While other university programs, such as political science or communication, are not specifically geared toward producing practitioners for a single, primary field, the value of media-related degrees is usually connected to their ability to prepare students to work in the mass communication professions. The media industries

represent a unique paradox for aspiring professionals and the institutions of higher education that educate them. Audience demand for information continues to increase, making media industries among the fastest growing in the world (Cooper & Tang, 2010). At the same time, those entering these industries face high turnover, strong competition for available jobs, and elevated unemployment rates (2010). The uncertainties surrounding the media industries have not stopped increasing numbers of students from enrolling in and graduating from media programs (Vlad, Becker, & Kazragis, 2011). The number of mass media program graduates has increased each year during the past decade.

**Facing the Shifting Landscape.** Changes in technologies used by audiences and media practitioners have been at the heart of a perfect storm of uncertainty during the past ten years (State of the News Media, 2011). Audiences have become more fragmented in the choice-rich network society environment (Castells, 2009). The line between message creators and receivers has blurred. These shifts have changed the way journalists, public relations practitioners, advertisers, and other professional communicators do their work. Gade and Lowery (2011) noted “the Internet supports a virtual library of information and a news-on-demand marketplace, fundamentally changing relationships between news and audiences” (p. 5). Journalists, for example, no longer hold primary control of content creation, information diffusion, or access to newsmakers and high-profile sources (Gade & Lowery, 2011; Meraz, 2009; Singer, 2005). Shifts such as these have forced communication industries to re-evaluate norms and reconsider the skillsets practitioners need to succeed (Lowery & Gade, 2011).

The shifts and uncertainties found in the professional realm have certainly trickled down into mass communication programs at colleges and universities. About 90 percent of

program administrators noted in 2010 that they were facing “big challenges and issues” (Vlad, Becker, & Kazragis, 2011, p. 312). Changes in the professional industries have pushed administrators to update faculty skill levels and change curricula to include more digital media skills (Vlad et al., 2011). Yet, the decisions administrators must make are not clear-cut. Media programs do not face a simple task of shifting their focus toward a specific goal. Instead, the landscape remains in flux. As the communication industries seek solutions, media programs must work, shift, and innovate (Hunter & Nel, 2011). And change remains the only constant. Even recently completed curricular revisions face the prospect of being outdated as new technologies and trends evolve (Mensing, 2010).

Mensing (2010) advocates that media programs depart from the traditional, industry-centered approach to education. The author argues the traditional approach focuses on conventions and styles that are geared toward general interest, or mass, audiences (2010). Part of the industry-focused approach includes a heavy emphasis on skills, which the author argues does not serve student or industry interests in the long term. As the industry models struggle to adapt and remain relevant in changing conditions, Mensing (2010) suggests universities focus on community-centered journalism. The features of this approach include greater emphasis on collaboration with community members, more lively writing, and a truth vetting process that includes both journalists and audience members. In this formulation, the process becomes more important than the product.

**Skills and Concepts.** Efforts to reconsider and revise mass communication programs often note the historically heavy influence skills courses have within curricula (Mensing, 2010). Recent research shows analytical thinking skills and broader ways of

thinking are receiving renewed interest. Carpenter (2009) examined hundreds of media-related job advertisements. She grouped the content of the job notices into adaptive, nontechnical, and technical requirements. Adaptive requirements focused on broader knowledge and analytical thinking. Within this group, employers sought workers who had an outside knowledge area. Creativity, independent thought, and critical thinking skills were also among the most demanded areas. In the technical content area, the notices included 22 different desired skill sets, providing a daunting challenge for media programs. The nontechnical skill preferences focused on the ability to write, work efficiently on deadline, and edit. Overall, the study found employers want broadly rounded workers who have the ability to grow into their field. The findings mesh with Wick and Phillips' (2008) argument that students need the ability to think critically and to adapt to changes in their fields. The authors wrote "discipline-specific content knowledge we impart today will be insufficient tomorrow" (p. 22). But in a time of change, media programs are facing changes to curricula that focus on preparing students for the widening array of communication-related technology skills (Morgan, 2009). Lost in the efforts to prepare students for entry into media industries are more theoretical principles. Faculty have lamented students will leave the university adept at using technologies, but without an understanding of *why* they use the technologies (2009).

Concerns regarding skill-based mass communication curricula are not new. McCombs (1974) argued media programs focus on preparing students for the first six weeks of their jobs, and little more. The scholar noted journalism requires a broader, more liberal arts education that prepares students to explain the "what" and the "why" to their audiences. The skill-based focus of many media programs is not unfounded. Practitioners

focus on the more tangible questions of skill when hiring new employees (Lowery & Becker, 2001). The scholars found the level of skill a new graduate has in industry-standard software affects his or her ability to get a job. Lowery and Becker (2001) argued, despite their findings, that media programs cannot ignore analytical-level knowledge. The authors wrote media programs “benefit students through rigorous training in technological skills, but this need not be a zero-sum game. Ways must be found to teach skills in conjunction with more conceptual curricula” (p. 768). Shoemaker (1993) made a similar point. She noted media programs can no longer prepare students for a single job description. Students must be prepared to adapt to change. To this end, schools must offer courses that force students to analyze, synthesize, and carefully consider information (1993).

### **Bloom’s and Higher Education**

Shoemaker (1993) and other scholars’ contentions that mass communication curricula focus not only on skills but on higher-level knowledge competencies, such as critical and analytical thinking, connects with the second half of literature in this study. Bloom’s Taxonomy (1956) has been critiqued, vetted, and revised during the nearly sixty years since it was created. Still, it remains a vibrant part of many discussions regarding higher education curricula. This section briefly outlines the basic idea of the taxonomy and considers influences on student higher-level learning outcomes.

**Bloom’s pyramid.** Bloom’s Taxonomy was created to help educators evaluate their courses (Halawi, McCarthy, & Pires, 2009). Bloom outlined three areas of behavior: cognitive, affective, and psychomotor. The cognitive area focuses on knowledge and lays out six levels of learning. The levels are illustrated using a pyramid, starting with

knowledge at the wide base and culminating with evaluation at the tip. The levels, from lowest to highest, are knowledge, comprehension, application, analysis, synthesis, and evaluation (“Center for Academic Success,” 2011). Knowledge includes memorization but does not require understanding of content. Terenzini, Springer, Pascarella, and Nora (1995) noted this most basic level of learning does not remain in students’ memories long. And the information students remember quickly becomes outdated in the workplace. The middle layers are considered the target areas for undergraduate education (“Center for Academic Success,” 2011). Application refers to the ability of students to use information to solve problems and to connect concepts and how they work with one another. Analysis calls for students to identify concepts, arrange them, and grasp their meanings (2011). Evaluation, making decisions and supporting views, is viewed as the top of the pyramid. Len-Rios and Perry (2009) adapted Bloom’s taxonomy to their study of cross-cultural learning in a journalism course. The authors combined the bottom two layers of the taxonomy and labeled them conceptual. They defined the category as basic, factual knowledge of the topic. The third and fourth levels of the taxonomy, application and analysis, were combined and labeled analytical learning (2009). The authors highlighted this level included the ability to discern and employ conceptual knowledge. Len-Rios and Perry found engaging students in analytical-level learning is more difficult than teaching them more basic-level knowledge.

**Variables in student advancement.** Student perception of higher-level learning outcomes, and the levels to which they value them, cannot be evaluated solely on the basis of advancement through the mass communication curriculum. Other variables, such as the student’s major, travel, classes taken within a focus area, and parental education levels, for

example, must be considered. While these variables do not offer a complete account of how critical thinking develops in students, the literature notes they are among the most influential. Flack (1976) noted that students who study abroad during their undergraduate education return with new frames of reference and tastes for “higher” forms of culture. Students who study abroad “contribute to processes of social change, a deprovincialization and diversification of modes of living and functioning” (p. 113). Parental education levels have also been found to affect students’ ability to develop advanced levels of thinking (Kodde & Ritzen, 1988). The parental education levels help both in providing students with the economic resources to reach the university and with the mental preparation necessary to succeed. The relative rigor of a student’s individual major can also affect higher-learning levels (Sabot & Wakeman-Linn, 1991).

Scholars have found that the more courses a student takes in certain area, the more likely he or she is to develop related critical thinking abilities (Terenzini et al., 1995). In a related sense, the researchers noted courses that are integrated within a curricula are more likely to encourage analytical thinking skills than classes that are not carefully connected with overlapping conceptual bases. Certainly, the preceding list of factors is not exhaustive, but it provides a set of relatively distinct areas of influence that can affect a student’s learning levels. Scholars have found, overall, that both inside and outside of class experiences have significant influences on student analytical thinking development (1995). These findings are supported by research regarding how students mature during their time at the university. Freshmen enter the university with a variety of education and maturity levels. Scholars have found by the time students are seniors, they generally have higher critical thinking skills than their freshmen counterparts (McMillan, 1987).

### **Investigating Appreciation and Perception of Analytical Knowledge**

Mass communication programs have a history of emphasizing the skill-based knowledge that media practitioners favor and demand of new graduates (Lowery & Becker, 2001; McCombs, 1974). At the same time, scholars have argued media programs have an obligation to provide students with higher-level, analytically focused knowledge (Shoemaker, 1993). Len-Rios and Perry (2009) found pushing students to reach to higher levels of knowledge was more difficult than teaching lower-level knowledge. This study applies the model provided by Bloom's Taxonomy to examine the extent to which two groups of mass communication students value and perceive their own growth in higher-level, analytical thinking. Using the approach Len-Rios and Perry employed, this study divided Bloom's pyramid into two sections. The bottom two tiers, knowledge and comprehension, are called conceptual learning. The third and fourth tiers, application and analysis, are referred to as analytical learning. Generally, analytical learning is considered the goal of undergraduate-level education ("Center for Academic Success," 2011).

The hypotheses address the primary concerns of this study: student perception of analytical-level learning value and perception of higher-level learning advancement. The literature regarding student development indicates more advanced students should both value and perceive greater ability regarding analytical-level thinking. The three research questions are meant to explore other, external indicators regarding student growth and analytical-level learning. The literature suggested considerations such as those examined in the research questions can influence student development.

H1: Students in the senior-level media law course value higher-level, analytical knowledge more than students enrolled in the freshmen-level course.

H2: Those in the senior-level course will see analytical knowledge as more important to their career futures than those in the lower-division course.

H3: Students in the senior-level media course perceive themselves as having reached higher levels of learning than those enrolled in the freshmen-level course.

RQ1: Will significant differences exist regarding the value of analytical-level knowledge between students who had at least one parent graduate from a four-year university and those who did not?

RQ2: Will significant differences regarding the value of analytical-level knowledge exist between students who have studied in, lived in, or visited another country while in college and those who have not?

RQ3: Do significant differences exist regarding student field of study within the mass communication program and perceived value of analytical-level knowledge?

### **Methods**

**Sample.** A survey was administered to students in two mass communication courses in spring 2012. The first class was an underclassmen-based course that is required of all students entering mass communication majors at a large, public university located in the Midwest. The course is a prerequisite for almost all other courses in the program, and therefore an ideal place to gauge student perspectives regarding analytical thinking. The second course is a senior-level mass communication law class. The course is the last that students from all of the mass communication-related majors take. It is ideal for considering student analytical thinking perspectives as they finish their degrees and move forward to their careers. All respondents took the same survey, which included fewer than 30 items and took less than 15 minutes to complete. The survey included predominately Likert-like

scale statements, which were based on a range from one to five. A five indicated strong agreement and a one indicated strong disagreement.

The combined enrollment of the two courses was 288 students. Of that total, 186 completed the survey, a 64.5 percent response rate. One hundred students from the lower-level writing class completed the survey. Eighty-six students from the communication law course completed the survey. Participants were 76.3 percent female ( $N = 142/186$ ) and 23.7 percent male ( $N = 44/186$ ). Students in the lower-level writing class were 55 percent freshmen ( $n = 55/100$ ) and 32 percent sophomores ( $n = 32/100$ ). Participants in the law course were about 70 percent seniors ( $n = 60/86$ ), 29 percent juniors ( $n = 25/86$ ).

**Measurements:** This study divides Bloom's taxonomy into two sections. The bottom two rows, knowledge and comprehension, are considered conceptual learning. The third and fourth rows, application and analysis, are labeled analytical learning. Student perceptions regarding their own advancement in higher-level, analytical learning were measured using four survey items ( $\alpha = .67$ ). Student perceptions of advancement in lower-level, conceptual learning were also measured using four survey items ( $\alpha = .59$ ).

The relative value students placed upon analytical learning skills, as compared to conceptual knowledge, was measured in three units of three survey items. The first group of survey statements examined students' perceptions of critical and analytical learning in their upcoming careers in the mass media ( $\alpha = .58$ ). The survey, for example, measured student responses to the statement: "The ability to solve problems will be important after I graduate." The second group pitted practical skills, conceptual knowledge, against "theory," analytical learning ( $\alpha = .59$ ). The group, for example, included the statement: "knowing how to do the job is more important than knowing why I do the job." The third

group focused on student perception of advancement regarding analytical learning while studying mass communication ( $\alpha = .76$ ). One of the statements, for example, was: “courses in my major have focused on critical thinking skills.”

Finally, the three research questions examined external variables regarding student value and self-reported perception of advancement in analytical learning. Students answered a series questions regarding their area of study within the mass communication program, their parents’ level of education, and whether they had studied, lived, or visited abroad while enrolled in college. Both independent samples t-tests and a one-way ANOVA were used to analyze results regarding external influences on students’ perceived analytical thinking values and development.

### Results

Hypothesis 1 posited that the more advanced students, those in the senior-level media law course, would value analytical knowledge more highly than the students in the lower-level course. This hypothesis was not supported. Two independent sample t-tests were conducted to test the hypothesis. The first compared the extent to which students valued analytical-level knowledge in the higher-level and lower-level courses. No significance was found between the upper-level students ( $M = 4.14, SD = .44$ ) and lower-level students ( $M = 4.18, SD = .44$ ) in the two classes ( $t(181) = .66, p = .509$ ). The second test compared the perceived value of conceptual-level knowledge between the two courses. Again, no significance was found between the senior-level students ( $M = 3.49, SD = .58$ ) and the lower-level students ( $M = 3.61, SD = .63$ ) in the two classes ( $t(182) = 1.32, p = .188$ ). While the hypothesis was not supported, it is noteworthy how close the means were between the classes regarding analytical and conceptual-level learning. Also worth

highlighting is how the two classes were both a little more than half a point higher in their evaluations of analytical knowledge as compared to conceptual learning. The upper-level class' mean for analytical learning was .65 higher. The lower-level classes mean was .57 higher.

Hypothesis 2 predicted that students in the senior-level media law course would view analytical knowledge as more valuable to their future careers than students in the freshmen-level course. This hypothesis was tested using two statement clusters from the survey. The first cluster sought to measure the level of value students placed on analytical skills as they related to future employment. The second cluster examined respondents' preference of analytical skills versus more skill-based applications of learning. In both instances independent samples t-tests revealed the hypothesis was not supported. As with Hypothesis 1, the two classes were unexpectedly similar. No significance was found between students in the communication law course ( $M = 4.33$ ,  $SD = .55$ ) and those in the lower-level writing class ( $M = 4.40$ ,  $SD = .46$ ) regarding the value of critical thinking skills in the workplace ( $t(184) = .998$ ,  $p = .320$ ). Similarly in the second cluster, no significance was found between the more advanced group of students ( $M = 2.97$ ,  $SD = .73$ ) and the students in the freshmen-level course ( $M = 2.87$ ,  $SD = .70$ ) regarding the extent to which they valued analytical knowledge over skills-based learning ( $t(181) = .929$ ,  $p = .996$ ). The students again showed little change regarding the value placed on analytical knowledge between beginning their work in the mass communication program and those nearing its completion. As a whole, students largely valued analytical thinking as an asset in future employment ( $M = 4.37$ ,  $SD = .50$ ) and were more neutral regarding placing analytical knowledge over skill-based learning, such as computer skills ( $M = 3.45$ ,  $SD = .55$ ).

Hypothesis 3 posited that the students in the senior-level class would view themselves as having reached more advanced, analytical levels of learning in their years of study than their counterparts who are earlier in their studies. An independent samples t-test revealed this hypothesis was not supported. As with the previous two hypotheses, the students showed almost no change between the two class groups. No significance was found between students in the senior-level course ( $M = 3.74, SD = .67$ ) and those in the lower-level class ( $M = 3.68, SD = .69$ ) regarding perceived attainment of analytical knowledge ( $t(183) = .534, p = .594$ ).

The trio of research questions endeavored to flesh out other influences on analytical learning and provide a more complete picture of how students perceive and value higher-level learning outcomes outlined in Bloom's Taxonomy. Research Question 1 asked if a student's level of value regarding analytical knowledge was influenced by his or her parents' level of education. Both the analytical learning cluster of questions and the conceptual learning clusters were tested. Both independent samples t-tests found no significant differences between the groups. In the analytical cluster, no significant differences existed between students who had at least one parent who had earned a four-year degree ( $M = 4.16, SD = .45$ ) and those who had not ( $M = 4.16, SD = .43$ ) regarding the value of analytical learning ( $t(181) = .001, p = .999$ ). In the conceptual cluster, no significant differences were found between the students who had at least one parent who had a four-year degree ( $M = 3.52, SD = .63$ ) and students whose parents had not earned a degree ( $M = 3.70, SD = .51$ ) regarding the value of conceptual learning ( $t(182) = 1.74, p = .084$ ). So, whether a student had a parent who earned a four-year degree or not did not

appear to influence the level of value a student placed on higher or lower-levels of learning.

The literature indicated that international travel often broadens the way students think (Flack, 1976). Research Question 2 asked if significant differences would be found regarding value of analytical learning between students who have studied in, lived in, or visited another country while enrolled at the university and those who had not. An independent samples t-test revealed that those who had not traveled valued analytical-level learning ( $M = 4.20, SD = .42$ ) significantly more than those who had ( $M = 4.03, SD = .49$ ) traveled ( $t(181) = 2.37, p = .019$ ). Interestingly, the conceptual learning cluster data was not significantly different. Those who had traveled ( $M = 3.56, SD = .49$ ) were not significantly different from those who had not ( $M = 3.56, SD = .64$ ) traveled ( $t(182) = .003, p = .998$ ). In the case of Research Question 1, the significance moved in the opposite direction as the literature indicated. Students who had not traveled overseas while enrolled valued analytical-level learning more than those who had.

Finally, Research Question 3 examined if students' fields of study influenced the relative value they placed on higher-level, analytical learning. The survey asked students to indicate which of five majors they were studying: journalism, public relations, advertising, professional writing, or broadcast and electronic media. A one-way ANOVA was conducted to compare the effect of major on the extent to which students valued analytical knowledge. There was not a significant effect between area of study and value of analytical learning ( $F(4, 178) = .888, p = .473$ ).

## Discussion

This study used Bloom's taxonomy as a basis for considering the extent to which students value higher-level learning at the beginning and end of their undergraduate mass communication studies. It also compares the groups regarding the extent to which higher-level learning is connected to future employment. The study comes during a time of profound change in the communication industries (Lowery & Gade, 2011). And, as a result, a continuing skill-focused, technology-based shift in curricula at universities across the nation (Carpenter, 2009). Bloom's taxonomy, on its most basic level, indicates that students should have strong mastery of basic comprehension and definitional-level knowledge when they complete high school (Center for Academic Excellence, 2011). Students are expected to climb the taxonomy ladder while in college. They should move to more analytical learning levels. The results of this study, broadly, showed almost no difference between students who are just beginning their university experiences and those who are completing their studies. In fact, the strong similarities between the two class' results, and the near uniform contradiction the data present in regard to existing literature, provide noteworthy, if unexpected, findings.

None of the hypotheses that indicated the more advanced students would hold analytical-level learning in higher regard was supported. Generally, students, no matter where they were in their studies, valued higher-level thinking more than skill-based learning. The analytical-level thinking mean of 4.16 for all respondents ( $SD = .44$ ) comes from a five-point Likert-like scale (a five indicated strong agreement, while a one indicated strong disagreement). At the same time, skill-based knowledge scored more closely to the mid-point, with a mean of 3.56 ( $SD = .61$ ). While it is important to remember this study did not measure students' actual learning levels, the findings still, importantly, show two

significant patterns: (1) Students, despite the relatively skill-oriented focus of mass communication programs, appear to value higher-level thinking more than conceptual-level knowledge and (2) students do not appear to become more or less analytical-level learning oriented during their time in mass communication programs.

While existing literature showed mass communication programs were focusing on adapting to skill-based demands related to the changing technology in media fields (Vlad et al., 2011), this study's results show students in both stages of their mass communication studies, regardless of major and external factors, agreed high-order thinking skills were more important than critical thinking skills ( $M = 4.16$ ,  $SD = .44$  and  $M = 3.55$ ,  $SD = .61$ , respectively). Students also showed a strong appreciation for analytical-level learning when it was connected to their perceptions of the requirements of future employers. As a whole, the respondents' mean was 4.37 ( $SD = .50$ ), indicating strong views regarding the importance of analytical skills after graduation. The only indicator that showed weaker support for analytical-level knowledge was in the cluster of questions that required students to choose between skills or theory-based learning. One of the statements, for example, read "practical skills are more important than theoretical and conceptual knowledge." The combined mean for the answer was just shy of the midpoint in the five-point scale ( $M = 2.92$ ,  $SD = .71$ ). Even the less enthusiastic support of higher-level learning found in this set essentially places it on neutral ground with skills-based learning. The results indicate that in the mix of skill and conceptual courses, students are finding value in less tangible course content. The onset of massive technological changes in the industries they are seeking to enter has not, the results suggest, forced them to narrow their focus to mastering skills in specific practices and software and hardware tools at the expense of

analytical knowledge. In other words, students did not indicate knowing *how* to do the job was more important than knowing *why* they were doing the job.

While analytical knowledge received relatively favorable support from students, when compared with critical skills knowledge, the results provide some evidence that mass communication programs could do more to emphasize higher-level learning. It was unexpected that no significant progression could be seen when responses from students from the entry-level course were compared with those from the senior-level law course data. Not only were no significant differences found between the groups, the data were nearly identical. Table 1 illustrates how close the two courses' responses were. When comparing perceptions of analytical-level knowledge, for example, the upper-level course's mean was 4.14 ( $SD = .44$ ) and the lower-level course's mean was 4.18 ( $SD = .44$ ). The nearly identical results, in all five clusters of questions, while contradictory to the study's hypotheses, raise a gaggle of valuable research questions for future study. One of the key ideas that arises, in relation to the literature, is whether mass communication programs are failing to emphasize analytical-level thinking enough, and because of this students' perceptions of high-level knowledge are not increasing as they move through their degrees. Survey respondents appeared to value analytical thinking when it was listed on its own ( $M = 4.16, SD = .44$ ). When it was placed with skill-based knowledge, it did not fare as well ( $M = 2.92, SD = .71$ ). So, survey responses provide some evidence to support that mass communication programs could do more to emphasize analytical-level knowledge. The idea that mass communication programs could do more to support higher-level learning outcomes was also supported when students responded to statements regarding their perceptions of how their analytical knowledge levels have increased while

enrolled. The overall mean was 3.71 ( $SD = .68$ ), which is getting near the scale's midpoint. Also, the senior-level course's responses were nearly the same as the entry-level course ( $M = 3.73$ ,  $SD = .67$  and  $M = 3.68$ ,  $SD = .69$ , respectively). While these results can be seen as indicating students in mass communication programs do not perceive improved analytical knowledge or values of higher-level learning, further study of the topic is needed.

This study includes a relatively small sample and represents findings from only two courses at a single university. So, more robust sample sizes from a greater diversity of courses and universities would certainly improve the strength of this study's findings. Also, this study is relatively preliminary and general. Future studies could consider the question of how actual, versus perceived, analytical knowledge evolves during students' time in mass communication programs. Also, faculty influences on higher-level learning development must be considered when examining the questions outlined in this study. So, future research could compare student and faculty perceptions regarding the value and necessity of analytical-level learning in mass communication curricula.

Table 1

*Means Comparisons Between Two Sets of Mass Communication Students*

Survey Statement Cluster	Senior-level	Lower-level	Difference
Value of analytical thinking	4.14	4.18	-.04
Value of conceptual thinking	3.49	3.61	-.12
Analytical thinking and employment	4.33	4.40	-.11
Perceived increase in analytical learning	3.74	3.68	.06
Analytical versus skills knowledge	2.97	2.87	.10

*Note.* None of these means sets, when compared, were statistically significant at .05.

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