# Predictors of Technical and Administrative Innovation In Professional Communication Education At Institutions of Higher Education

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A B S T R A C T

Educational institutions that provide journalism and mass communication education around the world are being required to adapt and innovate as the labor markets to which they are linked face disruption. This paper examines a single educational system, that of the United States, to try to understand innovation and offers a theoretical model that can be used more generally. The data suggest that, contrary to previous research from other settings, organizational complexity in U.S. journalism and mass communication programs is related to decreased administrative innovation. In keeping with previous research, strong professional ties were negatively related to administrative innovation in JMC programs. In keeping with theories of institutionalism, large-scale curricular reform seems to be a slow and difficult process within journalism and mass communication, even in the face of a rapidly changing external environment.

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## Introduction

The educational institutions that provide journalism and mass communication education around the world are being required to adapt and innovate as the labor markets to which they are linked face disruption. The traditional employers who have hired journalism and mass communications graduates in the past are downsizing, while new and different forms of communication companies with different labor needs are emerging.

At the same time, the institutions of higher education in which journalism and mass communications programs are embedded are confronting technical and competitive challenges of their own. Reductions in government financial support for higher education, rising tuition costs, and stagnant wage rates have fueled public debate about the value and goals of higher education. As a consequence, universities are demanding that individual programs demonstrate their continuing value in the 21st century as measured by student demand, faculty research productivity and funding, external financial gifts, and job placement rates for graduates.

These pressures leave journalism and mass communication programs around the world facing a dilemma similar to the one faced by the legacy media industries they have long served: How and when do organizations innovate to meet changing demands and emerging markets, when innovation requires shifting their commitment from the stakeholders who have long justified the organization's existence to new and uncertain markets?

This paper examines that question in the context of journalism and mass communication education by focusing on one set of educational institutions and one labor market as an exemplar. Universities offering journalism and mass communication education in the United States are the focus of the analysis because of the availability of data. Not all educational systems are the same,

but the paper provides a conceptual framework that will guide discussions in settings around the world.

The paper builds on earlier work that examined factors that predicted innovation–or the lack of it--in the U.S. journalism and mass communication market. The data come from a census of U.S. university-level journalism and mass communication programs and provide new data on predictors of such innovative strategies as faculty hiring and promotion, curricular innovation and change, and approaches to organizational structure.

## Previous Research

Organizational innovation (OI) has been the subject of an enormous volume of research across multiple fields. The understanding of the factors influencing OI has grown increasingly complex, as scholars' conceptualization of "innovation" has subdivided. This has been driven by findings showing empirical distinctions among characteristics of innovation as well as distinct types of predictors of these characteristics. In general, two main types of innovation have emerged: (1) Administrative innovation, sometimes called organizational or structural innovation, and (2) Product innovation, sometimes referred to as technical innovation (Camarero & Garrido, 2008; Damanpour, 1991; Santos-Vijande, López-Sánchez & González-Mieres, 2012; Wang & Ahmed, 2004). Administrative innovation is controlled at the managerial or ownership level. Administrative innovations "involve organizational structure and administrative processes" and are directly related to the management of work (Damanpour, 1991, p. 560). Product innovation pertains to "products, services and production process technology" and is related to daily work activities and the resulting products and processes (Damanpour, 1991, p. 560).

A host of factors across levels of analysis shape the likelihood of innovation within organizations, and research in OI suggests predictors of administrative innovation differ from

predictors of product innovation. Administrative innovation is encouraged by greater degrees of organizational centralization and formalization (more elaborated and stricter policies and rules) and low professionalism (Damanpour, 1991; Kimberly & Evanisko, 1981). The inverse tends to be true for product innovation, as higher degrees of professionalism, and less internal centralization and formalization encourages product innovation (Kung; 2004). In other words, tighter internal structures tend to aid efforts to restructure and manage operations, decisions that occur at higher levels of the organization where direct monitoring is easier and more effective. However, looser internal structures tend to encourage the development of new ideas related to daily work and new products at lower levels of the organization. The research suggests direct control from the top is less effective at lower levels, as top managers are less able to monitor and accurately understand the work processes at lower levels (Damanpour, 1991; Tolbert & Hall, 2009).

*External influences and weak ties*

Research on organizational innovation also has shown the importance of an organization's environmental context (Hardy, Phillips & Lawrence, 2003; Swan & Scarrough, 2005). An increasingly prominent concept in OI is the organization's "absorptive capacity," or the ability of the organization to explore and access helpful new ideas from external networks, and then communicate these ideas effectively across internal divisions (Cohen & Levinthal; Wu & Liu, 2009). Product innovation within organizations is especially enhanced by "dynamic environments" and environments that offer a greater possibility of new knowledge transfer and processing of new information. These findings are consistent with the literature on "weak ties," within organizational networks. Weak ties are distant, relatively tenuous connections that are found outside of an organization's long-standing, familiar and immediate environment. An

example is the professional-level relationship, which tends to connect organizational members to reference groups beyond organizational boundaries but within the same field or a related field. Weak ties are more likely than "strong ties," which are connections within an individual's or organization's immediate social and community networks, to provide new ideas. Strong ties are useful for providing predictable resources and stability, but overreliance on them may buffer organizations and their staff from outside influences and, therefore, from change (Granovetter, 1973; Powell, Koput & Smith-Doerr, 1996; Swan & Scarbrough, 2005).

Ongoing connectedness with external associations, organizations and institutions that offer new, unfamiliar knowledge encourages organizations to develop competencies for identifying, and internally developing and communicating new ideas and new practices (Henderson & Cockburn, 1994; Lofsten, 2014). Also, organizations that have diverse, complex external connections may grow in internal complexity, as managers find it necessary to develop internal boundary-spanning units to reduce uncertainty in these multiplying relationships. Increased organizational complexity may indicate that a firm is able to access and process new ideas. But organizational complexity may also lead to internal communication obstacles and management problems, which can slow the transfer and development of news ideas within the organization (Tolbert & Hall, 2009).

*Institutional connections and innovation*

While network connections with other entities in an organization's environment can enhance the acquisition and transfer of new knowledge, institutionalized connections may constrain and slow innovation. Institutional theory argues that organizations that share markets, values, norms, and processes will tend to become increasingly similar to one another, deriving legitimacy from conformity with the other entities in their industry or field.

An organization operating within a more highly institutionalized environment is likely to seek accord with the principles and regulations of dominant external institutions in order to demonstrate public legitimacy. New ideas from beyond the institutionalized environment are less likely to be embraced and may even be avoided. New ideas even may be perceived as threats to the accord with an institutional environment and the legitimacy it offers.

A commonly studied institutional environment is higher education, a field constrained and guided by accreditation policies as well as government regulations and laws, particularly in the case of public universities. Accreditation processes are "highly scripted procedures for attaining and retaining legitimacy" that either reaffirm status, or involve efforts to "mimic an entirely different set of norms, rules, beliefs and values" (Rusch & Wilbur, 2007, p. 302). Accreditation compliance may benefit public legitimacy and status more than it improves program quality (Cret, 2011).

There has been conflict over the benefits of accreditation within the field of journalism and mass communication education, and it is not clear from prior study that accredited programs are more effective than unaccredited programs (Blom, Davenport & Bowe, 2012; Seamon, 2010). Accreditation has been found to be associated with constrained flexibility in teaching skills courses (Cusatis & Martin-Kratzer, 2010; Hatzios & Lariscy, 2008; Masse & Popovich, 2007), with limiting opportunities for student development (Blom, Davenport & Bowe, 2012) and with a preference by programs for distinct tracks that are organized along traditional industry lines rather than converged tracks (Blom, Davenport & Bowe, 2012; Lowrey, Daniels & Becker, 2005; Lowrey, Becker & Vlad, 2011).

While accreditation can confer legitimacy on a journalism program, the accreditation process' focus on professional education puts accredited JMC programs at odds with the

institutional norms of the universities that house them, particularly at research intensive universities. In the U.S., the Accrediting Council on Education in Journalism and Mass Communication (ACEJMC), the official accrediting body for the field, splits membership between representatives from legacy media-industry associations and journalism education associations, with up to three representatives of the "public." Associations may have more than one representative on the Council but must pay $3,000 annually for each representative. The standards for JMC accreditation focus heavily on professional skills education appropriate to preparing students for jobs in specific legacy media industries. These requirements set up tensions in many U.S. journalism and mass communication programs between the conflicting needs to hire faculty with extensive professional media experience, who can teach the courses required for accreditation, and the need to hire academically trained faculty, who can meet the research expectations of the parent university.

Exacerbating this tension is the financial stress public universities, in particular, now face. As state support declines and tuition rises, universities are pressuring faculty to increase their research grant income and program administrators to increase fundraising from donors and supporters.

Meeting the University's demand to increase external research income requires journalism and mass communication programs to hire more research faculty and, particularly, faculty who study one of the relatively few areas of communication where external research funding is available, such as health communication. Hiring faculty for the research-funding potential suggests a stronger alignment with the institutional values of higher education over those of traditional media industry stakeholders. Conversely, however, meeting the university's growing emphasis on increasing financial support for academic programs through gifts and

grants generally requires that journalism and mass communication programs cozy up to legacy media industries. Historically, in the U.S. the primary source of external donations to journalism and mass communication programs has been the newspaper industry, with far fewer gifts made by other traditional media sectors and even less financial support offered by emerging content creators and distributors.

In summary, then, journalism and mass communication programs are increasingly caught between the competing institutional values of higher education and those of the legacy media professions, with which journalism and mass communication program historically have aligned. From the perspective of organizational innovation theory then, there is evidence that accreditation processes, in general, may limit both administrative and product innovation. In the case of schools of journalism and mass communication, this may discourage efforts to converge units across traditional industry lines, hire faculty who come from non-traditional backgrounds, or partner with external units or companies (administrative innovation). Accreditation and emphasis on professional alliances may discourage efforts to teach new content and skills in the classroom (product innovation).

On the other hand, it must be noted that seeking to be in accord with one's institutional field can lead to change as organizations become isomorphic, or more like one another, in the pursuit of legitimacy. Schools may pursue new ways of structuring curricula, teaching innovations, or collaboration with other academic units or media companies, if it is apparent that other schools, especially prominent schools, are doing so.

**Research Questions and Hypotheses**

RQ1: What factors are influencing the willingness of journalism and mass communication programs in the United States to innovate in the face of changing conditions in both the universities and industries they serve?

Journalism and mass communication programs are under increasing pressure to meet multiple and often conflicting institutional demands. For example, they are expected to continue to prepare students for jobs in legacy media industries, while also preparing them for jobs in emerging industries where educational and skill requirements differ. At research-intensive universities, JMC programs face increasing pressure to maintain the legitimacy of the professional education they provide, while also increasing their research productivity and research grant income. Research is an inherently collaborative activity, as individual researchers seek and share knowledge across educational institutions, and also seek grants from a variety of funding organizations. The more institutions with which an organization affiliates and the greater the variation of the demands those institutions place on the organization, the more weak ties the organization will have. Therefore:

H1: Journalism and mass communication programs in research-intensive universities will show a higher level of administrative (structural) innovation than will JMC programs in less research-intensive universities.

H2. Journalism and mass communication programs in research-intensive universities will show a higher level of product (instructional) innovation than will JMC programs in less research-intensive universities.

Research suggests that formal processes of accreditation increase institutional isomorphism and thereby reduce organizational innovation. Therefore:

H3. Accredited journalism and mass communication programs will show a lower level of administrative (structural) innovation than will non-accredited JMC programs.

H4. Accredited journalism and mass communication programs will show a lower level of product (instructional) innovation than will non-accredited JMC programs.

Research suggests that organizations with more weak ties are more exposed to new ideas than those with fewer weak ties. Within universities, administrative structures that group highly similar programs together into independent administrative units increase the strong ties within those units and reduce interdisciplinary interactions. Also, administration of independent units of highly similar programs is likely to be more coherent and more direct because the task of oversight is less complex – there are fewer, more similar knowledge areas to monitor. This means individual programs will be more tightly controlled internally, a situation that tends to limit possibilities for externally driven product innovation. Therefore:

H5. Journalism and mass communication programs that operate as independent administrative units will show lower levels of product (instructional) innovation than will JMC programs that operate as small units within more diversified administrative structures.

A high level of professional orientation tends to provide more opportunities for acquisition of new knowledge, as individuals within a professionally oriented organization are more likely to have weak ties with other professionals in other organizations and institutions. Professional associations also offer members organized knowledge resources (journals, websites, etc.), and organized avenues for further knowledge acquisition (regular conferences and workshops). Conversely, high levels of professionalism often prove a hindrance to administrative innovation as organizational and professional priorities clash. Therefore:

H6: Journalism and mass communication programs with stronger professional connections will have lower levels of administrative (structural) innovation than will JMC programs with weaker professional connections.

H7: Journalism and mass communication programs with stronger professional connections will have a higher level of product (instructional) innovation than will JMC programs with weaker professional connections.

Research has shown that organizations with less rigid, horizontal administrative structures are more likely to produce innovative ideas and products than organizations with more complex, rigid, vertical structures. Also, public educational institutions will be more constrained in their efforts to change because of their need to be in accord with government regulations and because they need to maintain public legitimacy. Therefore:

H8: Journalism and mass communication programs within public institutions will have a lower level of product (instructional) innovation than will JMC programs within private institutions.

JMC programs with graduate programs have more opportunities for boundary spanning and for establishing weak ties because graduates are more likely to take jobs with other educational institutions, and because graduate education requires faculty to conduct research, which itself encourages weak ties. Therefore:

H9: Journalism and mass communication programs with graduate programs will have a higher level of product (instructional) innovation than will JMC programs without graduate programs.

## Methodology

These hypotheses were tested with data from a single country, the United States. That county is appropriate because of the long tradition of journalism and mass communication

education, because of the scope of the higher educational system, and because of the dramatic changes taking place in the journalism and mass communication labor market in that country.

Data appropriate for a test of the hypotheses come from the 2012 Annual Survey of Journalism & Mass Communication Enrollments, an ongoing census of journalism and mass communication programs in the U.S. The data were not gathered specifically to test the hypotheses formulated here, but an examination of the survey instrument indicated that the data provided suitable measures of the key variables identified in the literature reviewed above.

The population of schools included in this survey is defined by listing in either the *Journalism & Mass Communication Directory*, published by the Association for Education in Journalism and Mass Communication, or The Journalist's Road to Success: A Career Guide, available online from the Dow Jones News Fund, Inc. All degree-granting senior colleges and universities with courses organized under the labels of journalism and mass communication are invited to be listed in the AEJMC *Directory*. To be included in the Dow Jones guide, the college or university must offer at least 10 courses in news-editorial journalism, and those courses must include core courses, such as an introduction to the mass media and media law and ethics, as well as basic skills courses, such as reporting and editing. Journalism programs listed in the AEJMC *Directory* in the United States, including Puerto Rico, are included in the population definition, but not listed programs from outside the United States.

A combination of these two directories produced 488 listings in 2012. In October 2012, a questionnaire was mailed to the administrator of each of these programs. A second mailing of this questionnaire was sent to the non-responding schools in December. A third mailing was sent to the non-responding schools in January of 2013. In February, the administrators were sent a fourth mailing. The 245 administrators of the programs who had not responded by the beginning

of April were contacted by telephone and asked to answer as many of the questions over the telephone as possible. Three of the 488 schools reported, as a result of the contacts, that their programs were no longer active and were eliminated from the population.

With each mailing, administrators were given the option of returning a printed form via the regular mail, returning a downloadable form by mail or as an attachment to an email message, or completing the form online. When contacted by phone, administrators also were given the option of using a downloadable form or completing the survey online. In the end, 119 administrators (24.5%) used the online option.

The core of the questionnaire asked the administrators to provide information on total enrollments in autumn of 2012, enrollment by year in school, enrollment by sequence of study, enrollment by gender, and enrollment by racial or ethnic group. In addition, administrators were asked to indicate the number and type of degrees granted in the 2011-2012 academic year, degrees granted by sequence of study, degrees granted by gender, and degrees granted by racial group. Additional questions in the instrument focused on skills taught in the curricula, faculty size, faculty hiring, budgets, and a variety of other matters.

In 2012, responses were obtained for all of the 485 active programs in the population. Of the 485 returns, 342 were for programs listed in both directories, 96 were only in the AEJMC listing, and 47 were only in the Dow Jones Guide. Data on degrees offered and on enrollments at the bachelor's, master's, and doctoral level were obtained from all of the 485 programs. Of all these programs, 481 offered bachelor's degree programs, 217 offered master's degree programs, and 50 offered doctoral programs. There was variability in the detail and precision of the information administrators provided in response to the other questions on the instrument. Some administrators answered every question, while others answered only a few.

Data from the program administrators that were not obtained online were manually entered into a data file. Any inconsistencies in the original documents that were noted were corrected, sometimes by eliminating obviously erroneous information. All manual entry of data was then proofed against the original form. Reports by program administrators that were not clearly in error were taken as accurate. These data were then merged with the online data.

The AEJMC Directory lists membership of the Association of Schools of Journalism and Mass Communication (ASJMC) and accreditation by ACEJMC. This information was included in the data file. The most complete data were available for the 113 accredited programs. In general, less complete data were available for the 79 schools that are members of ASJMC but not accredited by ACEJMC. The 293 schools without accreditation or ASJMC membership had the least complete data. In general, these latter schools are smaller than the accredited or ASJMC-affiliated schools.

*Measures of Dependent Variables*

Administrative (or structural) innovation was measured in three ways. First, administrators were asked to indicate from a list of 27 communication specializations which were used at their university. Administrators could indicate they offered a journalism specialization by checking one or more of four categories: news editorial or print journalism, broadcast journalism, digital journalism, and journalism undifferentiated. Those administrators who reported they offered only "news editorial or print journalism" or "broadcast journalism," or who offered both news editorial/print and broadcast journalism but as separate sequences were scored as low in innovation. Those administrators who reported they offered digital journalism or journalism undifferentiated were coded as being high in innovation. The variable is labeled Journalism Sequence Innovation.

In addition, administrators were asked if they offered public relations, advertising, combined public relations and advertising, and strategic communications as specializations. Those administrators who reported they offered only either public relations or advertising, or who offered both public relations and advertising but as separate sequences were scored as low in innovation, while others were scored as high in innovation. The variable is labeled Public Relations/Advertising Sequence Innovation.

The survey also contained a question asking administrators if they had followed seven different strategies in dealing with personnel needs brought about by changes in the media landscape. These were: (1) Hired at least one permanent faculty member in the last year who has worked in digital media; (2) Hired in the last year adjunct faculty who have worked in the digital media; (3) Sent existing faculty to short courses or specialized training programs to help them acquire skills in the digital media in the last year; (4) Given existing faculty release time or summer compensation to teach themselves digital media skills in the last year; (5) Used in the last year demonstrated expertise in digital media as a criterion for a promotion and/or tenure decision; (6) Encouraged faculty in the last year to learn digital media skills by highlighting accomplishments and positive examples, and (7) Hired staff in the last year to provide the technical skills and support resources faculty need to improve their skills in digital media. A simple index was created by summing positive responses to these seven items as the second measure of administrative innovation. The variable is labeled Personnel Management Innovation.

Administrators also were asked: Are there any academic units on campus with which you share a program or collaborate some way on curriculum? A positive response to this question was used as the third indicant of administrative innovation. The variable is labeled Collaborative Innovation.

Technical (or product) innovation was measured via a question that asked administrators to review a list of types of professional communication skills, indicating which of those skills were being taught in the curriculum. The list contained 23 items: web layout and design, writing for the web, editing for the web, using the web in reporting, using graphics on the web, using audio on the web, using video on the web, using animation on the web, using still photographs on the web, using slide shows on the web, digital storytelling, entrepreneurial "start-up" skills, management skills for online or web publishing, optimizing web sites for search engines, driving traffic to web sites, assessing web analytics (audience statistics, feedback), using citizen/audience produced content, creating and using blogs, creating content for mobile devices, using social media, creating advertising for the web, selling advertising for the web, using the web in public relations. An index of product innovation was created by a simple summing of positive response to each of these 23 options. The variable is labeled Teaching Innovation.

The survey instrument also contained the question, Have you made curricular changes in the last two years in your program in response to changes taking place in the media and communication landscape? A positive response was treated as a second measure of product innovation. The variable is Labeled Curricular Innovation.

*Independent Variables*

A variety of measures of organizational complexity were used in the survey. Administrators were asked about the types of degrees their program granted. Programs that offered only a bachelor's degree were scored low in complexity, while programs that offered a graduate degree were scored high. The variable is labeled Graduate Degrees.

Programs that were accredited by ACEJMC were scored as complex because they meet a complex set of standards as part of the accreditation process. The variable is labeled

Accreditation. Similarly, programs that are members of the national educational association, the Association of Schools of Journalism and Mass Communication were scored as more complex than those that were not. The variable is labeled Professional Membership. Journalism and mass communication program at public institutions were scored as more complex than those at private institutions. The variable is labeled Public Control. Programs reporting directly to the central administration were scored as more complex than those that did not. The variable is labeled Independent Unit. Programs that are parts of universities with a research and graduate mission were scored as more complex than those that were not. The Carnegie classification of research mission was used for this final measure. The variable is labeled Research Institution.

**Findings**

As noted above, not all administrators reported data for all of the measures on the survey instrument. All but 65 of the 485 administrators reported on the sequences or specializations offered by their programs, but 118 of them did not offer any type of journalism. So the measure of Journalism Sequence Innovation is available for only 302 program, since those without a journalism offering were eliminated from the analyses. Similarly, 165 of the 420 programs reporting sequence data did not offer any advertising and public relations courses, so the measure of public relations/adverting innovation is available only for 255 programs.

The measure of Personnel Management Innovation was available for 183 programs, while the measure of Collaborative Innovation was available for 213 programs.

The measure of Teaching Innovation was available for 218 programs, and the measure of Curricular Innovation was available for 212 programs. All of the measures were either/or measures except for the measure of Personnel Management Innovation and the measure of Teaching Innovation. The range of scores for the former was from 0 to 7, with the mean being

2.84 and the standard deviation at 1.62. The measure of Teaching Innovation ranged from 0 to 23, with a mean of 14.38 and a standard deviation of 5.35. For the measure of Journalism Sequence Innovation, 214 (70.9%) of the 302 programs with a journalism sequence did not have divided programs in print and broadcast journalism. For the 255 programs with a public relations or advertising program, 171 or 67.1% did not have divided programs. Of the 213 programs for which data were available on Collaborative Innovation, 159 or 74.6% were involved in some sharing. For the 212 programs for which answers to the question on Curricular Innovation were available, 170 or 80.2% had made curricular changes in the last two years.

Table 1 shows a correlation matrix for the six measures of innovation used in the study. All measures are scored so a high score indicates high innovation. The two measures of sequence innovation, Journalism Sequence Innovation and Public Relations/Advertising Sequence Innovation, are slightly correlated for the 218 programs for which both measures are available. Both types of sequence innovation are negatively correlated with the measure of Personnel Management Innovation. Neither is strongly correlated with the measure of Collaborative Innovation. Collaborative Innovation also is largely unrelated to Personnel Management Innovation.

Table 1 shows that Teaching Innovation and Curricular Innovation are slightly positively related, and that Teaching Innovation is slightly negatively related to the two measures of sequence specialization. Teaching Innovation is positively related to Personnel Management Innovation.

Overall, that data in Table 1 suggest that the dependent variables are measuring rather distinct measures of innovation. The data suggest that some of the measures are tapping a kind of structure that is more resistant to change, such as sequence structure and collaboration across the

university. It seems that innovation in personnel management, teaching and curricular offerings happen independent of, and even at odds with, innovation in the structural areas.

Table 2 shows the intercorrelations of the six independent variables. High scores for all of these dichotomous variables mean high scores on the variable. In general, the various measures of the independent variables are weakly to moderately correlated with one another. Programs offering a graduate degree are more likely to be accredited, to be members of ASJMC, to be public, to be in independent units, and to be at research institutions. Accredited programs are more likely to be ASJMC members, to be at public institutions, to be independent units, and to be at research universities. ASJMC members are more likely to be at public institutions, to be independent units, and to be at research universities. Public institutions are no more or less likely to be independent units but are slightly more likely to be research institutions. Independent units are a bit more likely to be at research universities.

Table 3 shows the relationships between the predictor variables and the six measures of innovation. Those universities with graduate degrees are less likely to have been innovative in setting up their sequence structure, relying on traditional divisions between print and broadcast journalism and between advertising and public relations. They are more innovative in terms of personal management, collaborative arrangements in the university and teaching. Accredited programs show the same pattern, except that there is no relationship with the Collaborative Innovation variable. The same is the case for the Professional Membership variable. Public institutions are less innovative in terms of sequence structure and show no differences in terms of the other innovation measures. The Independent Unit measure is negatively related to the two sequence innovation measures, positively related to Personnel Management Innovation, and

positively related to the Teaching Innovation measure. The picture is much the same for the Research Institution measure.

Using the correlations shown in Table 3 for initial tests of the hypotheses showed the following:

**H1** was not supported. Being a research-intensive institution was not correlated with Journalism Sequence Innovation and was negatively (-.188) and significantly correlated with Public Relations/Advertising Sequence Innovation. It was weakly (.260) and significantly correlated with Personnel Management Innovation but not with Collaborative Innovation. Therefore, of the three measures of administrative innovation used in this study, for only one – Personnel Management Innovation – did being a research-intensive institution make a difference.

**H2** was partially supported. Research intensive universities were slightly (.152) and significantly more likely to show teaching innovation, but there was no relationship with curricular innovation. Thus, being a research-intensive university had only a partial and weak effect on product innovation as measured through instructional innovation.

**H3** was partially supported. Being an accredited journalism and mass communication program was related to less innovative, more industry-focused program structures, with the relationship being slightly stronger for Public Relations/Advertising sequences (-.317) than for Journalism sequences (-.209). Accreditation was positively, but weakly (.190) related to Personnel Management Innovation, but had no relationship with Collaborative Innovation. Thus, accreditation appears related to less administrative innovation, particularly in the area of organizational structure.

**H4** was not supported. Accreditation was positively and significantly (.281) related to Teaching Innovation, although it was unrelated to Curricular Innovation. Thus, Accreditation was at least weakly related to incremental innovations in the JMC instructional product.

**H5** was not supported and, indeed, there was evidence in the direction opposite the hypothesized relationship. JMC programs that operated as independent units within their universities were positively and significantly (.285) more likely to report Teaching Innovations than were units that operated within larger and more diverse units. There was no relationship, however, with Curricular Innovation.

Although not hypothesized, JMC programs that operated as independent units within their universities were significantly less likely to innovatively organize their Journalism Sequences (-.171) and Public Relations/Advertising Sequences (-.228). They were significantly more likely to report Personnel Management Innovation (.158), but no relationship was found with Collaborative Innovation.

**H6** was partially supported. JMC programs with strong Professional connections were significantly less structurally innovative in their sequences (-.162/-.326), but more innovative in their Personnel Management (.164). No relationship was found with Collaborative Innovation.

**H7 was** partially supported. Strong professional memberships were moderately (.348) and significantly related to Teaching Innovation, although such membership had no effect on Curricular Innovation.

**H8** was not supported. No differences were found between public and private universities and the likelihood of having engaged in either Teaching Innovations (.030) or Curricular Innovations (.028). However, although not hypothesized, Public Universities were significantly less structurally innovative in their JMC program sequence designs (-.147/-.202) than were private

universities. No differences were found in Personnel Management Innovation or Collaborative Innovation between public and private universities.

**H9** was partially supported. Offering graduate programs was weakly (.206) and significantly related to Teaching Innovation but was not related to Curricular Innovation. Although not hypothesized, graduate programs were found to be negatively related to Journalism Sequence Innovate (-.101) and Public Relations/Advertising Sequence Innovation (-.259). In contrast however, they were positively and significantly related to both Personnel Management Innovation (.264) and Collaborative Innovation (.116).

As Table 2 indicates, the independent variables are highly intercorrelated, making it difficult to sort out independent influences. Regression analyses for each of the dependent variables confirmed this. Public Relations and Advertising Sequence Innovation is significantly predicted by the six independent variables, but none of them is a significant predictor controlling for the others. The same is the case for Personnel Innovation. Teaching Innovation is significantly predicted by the six independent variables, and Accreditation and Independence of the Unit are significant individual predictors. The other three dependent variables are not significantly predicted by the six independent variables in the regression analyses.

**Conclusions**

Findings of this study show that administrators of programs that offer courses still differentiated by platform were less likely to hire new faculty with knowledge in digital media. Hiring faculty with this profile was related to both Teaching and Curricular Innovation, but not to developing collaborative partnerships with other units on campus. Overall, the data suggest that some resistance to change goes together with traditional sequence structures and that

innovation in teaching and hiring happens independent of innovation in structural areas. It also appears, however, that major curricular innovation can be stifled absent structural change.

Accredited programs and units with graduate degrees tend to rely structurally more on traditional industry-based differences between print and broadcast journalism and between public relations and advertising, but they are more innovative regarding faculty with digital media skills. Public institutions also are less innovative in terms of sequence structure. Journalism and mass communication programs that report directly to the university central administration and programs with a research and graduate mission are more innovative in hiring faculty and in adding new media courses to their curricula, but are less likely to bring changes to their sequence structure.

In summary, then, the data from this project suggest that, contrary to previous research (Damanpour, 1991; Kimberly & Evanisko, 1981), organizational complexity in U.S. journalism and mass communication programs is related to *decreased* administrative innovation as measured by program sequences and collaborative innovation. Only Personnel Innovation consistently increased with organizational complexity. In keeping with previous research, however, strong Professional ties were negatively related to administrative innovation in JMC programs. This suggests that the isomorphic pressures of institutionalism are more strongly felt by larger, more complex JMC programs than by their smaller, less formalized brethren.

Also in contrast with previous research (Damanpour, 1991; Tolbert & Hall, 2009), more complex JMC programs were found to have produced slightly more product innovation in the form of Teaching Innovation than less complex programs, although they were no more likely to have engaged in overall Curricular Innovation. Previous research had found that complex, hierarchical organizations were less like to succeed at product innovation than less complex

organizations because of formalized control structures (Kung; 2004). In this project, Teaching innovation was most strongly correlated with Professional Memberships (Table 3), in keeping with the theory that weak ties encourage change (Granovetter, 1973; Powell et al., 1996; Swan & Scarbrough, 2005). But surprisingly -- and in contrast with earlier work (Cusatis & Martin-Kratzer, 2010; Hatzios & Lariscy, 2008; Masse & Popovich, 2007) -- Teaching Innovation also was positively related to Accreditation, even when other variables were controlled. This suggests that more complex JMC programs, which also tend to be larger programs, have greater flexibility in introducing incremental innovation in the forms of individual courses. Faculty control over course development also may make it easier for incremental product innovation even in highly institutionalized JMC programs, as compared to other industries where management has greater control over daily production. In keeping with theories of institutionalism, however, large-scale curricular reform seems to be a slow and difficult process within journalism and mass communication, even in the face of a rapidly changing external environment.

For a long time, journalism and mass communication education in the United States has reflected in its approach the structure of a stable media system. The unprecedented turmoil and uncertainty in today's media landscape and a tough job market for journalism and mass communication graduates has encouraged administrators of such programs in the United States to experiment and even to take risks. While some administrators talk about adjusting their current curricula, others aim to more radical innovations. Internal or external factors, however, such as faculty resistance to new curricular offerings, budget constraints and adoption of accreditation standards have made some programs less successful in accommodating the demands of external change than others.

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**Table 1. Correlations Among Measures of Innovation**

| | | Journalism Sequence Innovation | Public Relations/ Advertising Sequence Innovation | Personnel Management Innovation | Collaborative Innovation | Teaching Innovation | Curricular Innovation |
|---|---|---|---|---|---|---|---|
| Journalism Sequence Innovation | Pearson Correlation | 1 | .237** | -.159* | .038 | -.126* | -.004 |
| | Sig. (1-tailed) | | .000 | .025 | .310 | .046 | .482 |
| | N | 302 | 218 | 152 | 175 | 179 | 174 |
| Public Relations/Advertising Sequence Innovation | Pearson Correlation | .237** | 1 | -.152* | -.134 | -.139* | -.062 |
| | Sig. (1-tailed) | .000 | | .047 | .056 | .047 | .233 |
| | N | 218 | 255 | 123 | 142 | 147 | 141 |
| Personnel Management Innovation | Pearson Correlation | -.159* | -.152* | 1 | .077 | .281** | .142* |
| | Sig. (1-tailed) | .025 | .047 | | .155 | .000 | .031 |
| | N | 152 | 123 | 183 | 175 | 178 | 175 |
| Collaborative Innovation | Pearson Correlation | .038 | -.134 | .077 | 1 | .136* | .107 |
| | Sig. (1-tailed) | .310 | .056 | .155 | | .025 | .063 |
| | N | 175 | 142 | 175 | 213 | 208 | 205 |
| Teaching Innovation | Pearson Correlation | -.126* | -.139* | .281** | .136* | 1 | .179** |
| | Sig. (1-tailed) | .046 | .047 | .000 | .025 | | .004 |
| | N | 179 | 147 | 178 | 208 | 218 | 212 |
| Curricular Innovation | Pearson Correlation | -.004 | -.062 | .142* | .107 | .179** | 1 |
| | Sig. (1-tailed) | .482 | .233 | .031 | .063 | .004 | |
| | N | 174 | 141 | 175 | 205 | 212 | 212 |

**Table 2. Correlations Among Independent Variables**

| | Graduate Degrees | Accreditation | Professional Membership | Public Control | Independent Unit | Research Institution |
|---|---|---|---|---|---|---|
| Graduate Degrees | 1 | .343** | .341** | .214** | .428** | .473** |
| | | .000 | .000 | .000 | .000 | .000 |
| | 485 | 485 | 485 | 485 | 219 | 485 |
| Accreditation | .343** | 1 | .554** | .269** | .339** | .356** |
| | .000 | | .000 | .000 | .000 | .000 |
| | 485 | 485 | 485 | 485 | 219 | 485 |
| Professional Membership | .341** | .554** | 1 | .219** | .339** | .340** |
| | .000 | .000 | | .000 | .000 | .000 |
| | 485 | 485 | 485 | 485 | 219 | 485 |
| Public Control | .214** | .269** | .219** | 1 | -.006 | .248** |
| | .000 | .000 | .000 | | .467 | .000 |
| | 485 | 485 | 485 | 485 | 219 | 485 |
| Independent Unit | .428** | .339** | .339** | -.006 | 1 | .256** |
| | .000 | .000 | .000 | .467 | | .000 |
| | 219 | 219 | 219 | 219 | 219 | 219 |
| Research Institution | .473** | .356** | .340** | .248** | .256** | 1 |
| | .000 | .000 | .000 | .000 | .000 | |
| | 485 | 485 | 485 | 485 | 219 | 485 |

**Table 3. Predictors of Innovation**

| | Journalism Sequence Innovation | Public Relations/ Advertising Sequence Innovation | Personnel Management Innovation | Collaborative Innovation | Teaching Innovation | Curricular Innovation |
|---|---|---|---|---|---|---|
| Graduate Degrees | -.101* | -.259** | .264** | .116* | .206** | -.019 |
| | .040 | .000 | .000 | .046 | .001 | .393 |
| | 302 | 255 | 183 | 213 | 218 | 212 |
| Accreditation | -.209** | -.317** | .190** | .006 | .281** | .086 |
| | .000 | .000 | .005 | .465 | .000 | .106 |
| | 302 | 255 | 183 | 213 | 218 | 212 |
| Professional Membership | -.162** | -.326** | .164* | .013 | .348** | .090 |
| | .002 | .000 | .013 | .425 | .000 | .095 |
| | 302 | 255 | 183 | 213 | 218 | 212 |
| Public Control | -.147** | -.202** | .088 | -.057 | .030 | .028 |
| | .005 | .001 | .118 | .204 | .332 | .341 |
| | 302 | 255 | 183 | 213 | 218 | 212 |
| Independent Unit | -.171* | -.228** | .158* | .017 | .285** | .077 |
| | .011 | .003 | .018 | .402 | .000 | .137 |
| | 179 | 148 | 177 | 207 | 210 | 206 |
| Research Institution | -.067 | -.188** | .260** | .083 | .152* | -.042 |
| | .124 | .001 | .000 | .113 | .012 | .269 |
| | 302 | 255 | 183 | 213 | 218 | 212 |