Past the platform: a learner-centered theoretical framework for adapting journalism curriculum

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ABSTRACT: New media technologies and applications are squeezing traditional professional practice skills curricula in journalism programs. This paper argues that it is time to move past the platform. Utilizing contemporary theories of organizational learning and organizational change, a new "frame experiment" is proposed to bring curriculum reform debates under new theoretical assumptions from the field of education theory, namely constructivism. The result is a model curriculum flow tuned to the learner's perspective, yielding surprising arguments about where best to begin.

INTRODUCTION: The rapid advancement of digital media technology is having a profound impact on democratic communication beyond the traditional scope of the professional journalist (Robinson, 2011; Anderson, Bell & Shirky, 2012; Campbell, 2013). Smart phones and social media platforms are changing the way citizens access, gather and distribute information – work that was once more reliably considered the purview of the profession. Traditional industrial contexts for employment are shrinking in both number and scope as the advertising revenues that paid journalists move with the audience into new mobile, multimedia and participatory sites of information exchange. It is the time of great disruption and fluidity in the business of journalism and journalism education is not immune (Murray, 2008).

Despite the dramatic disruption to the media production environment, learning how to report, write and produce news – the work of the professional journalist – still remain the expected outcomes of the average professional journalism school. But is this "training" for industry orientation to curriculum still an adequate frame by which to educate professionals capable of managing an uncertain future? How has the curriculum adapted to change in the past?

THEORETICAL FRAMEWORK: Peter Senge (1990) and Chris Argyris and Donald Schon (1974) state organizational leaders need to move beyond strategies that merely cope or adapt to new realities. This basic adaptation in journalism education has been single-loop learning, with little

incentive to revisit the entire curriculum flow in light of the new technologies, it was sufficient to react by "bolting on a new platform context until doing so no longer solves the problem. When the old assumptions no longer produce effective solutions, it is better for leaders to create conditions for generative learning – ways in which members of an organization may learn to build new "mental models" or schema on how things work.

Mental models are "deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action" (Senge 1990: 8). In leading an organization toward the development of new mental models, "the leaders' task is designing the learning processes whereby people throughout the organization can deal productively with the critical issues they face, and develop their mastery in the learning disciplines" (Senge, 1990: 345). Openness to new information or perspectives can have the effect of disrupting the assumptions underpinning old practices. This is essentially a reflective, double-loop learning process that engages practitioners in the creative construction of new perspectives to generate new repertoires of actions or responses (Argyris and Schon, 1974).

RESEARCH METHODS: The question at hand is where does journalism education go from here? This paper takes the inquiry a bit deeper and asks, what is this education for? What assumptions about the outcome are we making as educators when we negotiate new curricular inclusions or sequences with colleagues?

To accomplish this, the paper endeavors to engage a double-loop learning process. It begins by asking whether there are better ways to move forward in light of disorienting technological change. It seeks out new theoretical lenses to re-examine old practices in journalism education curriculum reform. It uses those to identify the implicit, underlying assumptions that provided the ongoing rationale for its current structure and sequencing. It then, through an alternate mental model to the industrial model for journalism, unpacks and reorganizes the traditional core curriculum for reporting It offers, in Schon's terms, a "frame experiment", as Waks (2001) explains:

[Schon] discovered that generative metaphors permitted us to 'construct meaning' in our perpetually changing circumstances, providing continuity between our older experiences and our new situations by pointing at similarities or family resemblances between them. We constantly find ourselves in disorienting situations which must be conceptually 're-framed', and until we discover through 'frame-experiments' a conceptual framework for the new situation we cannot even begin to determine what the

relevant facts are, or what evaluative criteria apply. Metaphors permit us to bring 'the familiar to bear in the unfamiliar in such a way as to yield new concepts while at the same time retaining as much as possible of the old' (Schon 1963, p. ix). (p. 38)

This frame experiment allows the deliberative organizational work of journalism curriculum reform to continue to occur with fidelity to alternative standards of practice – in this case, the standards of practice for effective learning in complex systems (Hase and Kenyon, 2001; 2007). With new digital technologies and applications arriving daily, the deliberation over what skills and knowledge stay and what go risks becoming hindered by allegiances to old ways of thinking, yet proceeding without any framework of evidence-based logic isn't ideal either. By re-evaluating the curriculum from the learner's perspective, journalism educators would be shifting the deliberation from what is taught (i.e., the skills and knowledge needed as an outcome for industry) to how one learns (i.e., what is needed in order to learn effectively). As Hase and Kenyon (2007) state:

Knowledge and skills or competencies can be acquired and even reproduced. But this is not learning at a deeper cognitive level. Learning is an integrative experience where a change in behaviour, knowledge, or understanding is incorporated into the person's existing repertoire of behaviour and schema (values, attitudes and beliefs). For example, it is possible to acquire a set of competencies that one can repeat in familiar or known circumstances. However, if learning has taken place, competencies can also be repeated and even adapted in unfamiliar, unanticipated situations. (p. 112)

To engage this frame experiment, this conceptual paper will use the following methodology. First, it will review a strand of learning theory known as constructivism. Selected relevant aspects of constructivist and cognitivist learning theory, such as Vygotsky's scaffolding, Bloom's taxonomy and Bandura's theories of self-efficacy, are reviewed in some detail for their relevance to decision-making in learner-centred design. Finally, an example of a reporting and writing sequence held to learner-centred principles is offered. Above all, this paper attempts to test the utility of the "frame experiment" for journalism education in the quest to discover new limits and explore new possibilities of meaning and purpose.

Constructivism in education - relevant concepts

Jones and Brader-Araje state that constructivism emerged in the 1980s "as one of the greatest influences on the practice of education" (2002). This is certainly not the only theoretical approach within education, nor is it without critique (see Boudourides, 2003; Jones & Brader-Araje, 2002; McMahon and Zyngier, 2009). However, construcivism holds the advantage of being a highly-utilized framework within North American education systems – a common and current

"mental model" for teachers (Brader-Araje, 2002). In higher education, faculty in professional practice programs are challenging themselves to reflect upon how they teach and focus upon whether the student is learning (for a comprehensive overview, see Whetten, 2007). Higher education is turning toward a learner-centred, rather than teacher-centred enterprise (Barr and Tagg, 1995; Hase and Kenyon, 2001,2007). Constructivist philosophy challenged longstanding behaviourist "transmission" models that considered knowledge to be an objective reality that existed external to the learner who could receive the knowledge by passively listening to the teacher. Constructivism replaced that concept of learning with a subjective, active process of meaning-making between the student, the teacher and the learning context itself (von Glasersfeld, 1989). This was a shift from pedagogy (seen as teacher-centred) to androgogy (the teaching of adults that was both learner- and teacher-centred) and continues along this spectrum of learner-centredness to heutagogy – the contemporary model in which self-directed and self-constructed learning become the focus (Hase and Kenyon, 2007).

Constructivists reject the notion that students begin as empty vessels that will fill with information without critique. They anticipate students will bring relevant prior knowledge to bear and will make sense of the information for themselves in an active way. Teachers create meaningful spaces for self-directed inquiry that is iterative and dialogical (Jones and Brader-Araje, 2002). Learning is a process of reflection and action on the part of the learner that can only be facilitated by the teacher. Engaging in direct experience enables the student to build her own understanding that evolves over time toward increasing complexity and mastery. The goal is to encourage learning that goes beyond the essential core competencies but also the development of capability in students in order that they might cope with the future. As Hase and Kenyon write (2001):

Capable people are more likely to be able to deal effectively with the turbulent environment in which they live by possessing an 'all round' capacity centred on self-efficacy; knowing how to learn; creativity; the ability to use competencies in novel as well as familiar situations; and working with others.

Learning how to learn is a different goal than learning how to use a particular technology or apply an explicit skill in a pre-determined way. Thus, the teacher must not only consider the information to be delivered but also the instructional design – the way in which it will be delivered (Whetten, 2008). Toward that end, cognitivists utilize several key theories in considering how to structure a curriculum.

Central to the constructivist model is the focus on making learning both relevant and attainable to the student at hand. One significant theory guiding this principle is Lev Vygotsky's Zone of Proximal Development (1978). He suggested that learning happens when the task to be learned is positioned in difficulty only slightly above the learner's current competency level. Positioning the task appropriately is thought to be necessary to maximize engagement in the learning. Too simple a task risks boring the learner and too difficult a task would discourage and demotivate; both are disengaging. Wood, Bruner and Ross (1976) extended Vygotsky's theory to the concept of scaffolded education. Scaffolding enables the learner to complete a task that is otherwise beyond his or her capacity by providing a scaffolding of peer or teacher support. The scaffolding enables the possibility of early success and encourages participation in the full experience even if all cannot possibly be mastered right away - both of which are engaging to the student. Education becomes something done best in the presence of others – the student is able to participate more readily if surrounded by peers and teachers who can help on demand (Jones and Brader-Araje, 2002). As such, opportunities to rehearse (trial and error), observe others, ask questions of others and eventually support others become necessary aspects of the process of learning a particular skill. Learning, under constructivist principles, is networked and chaotic – messy.

Assessment and evaluation tools enable the teacher to identify milestones and corral the activity into something purposeful. Evaluation in a scaffolded model would focus first on a narrow subset of the experience – on what parts the student can do now – and the feedback given is intended to be formative and encourage reflexivity, rehearsal opportunity and future goal setting as much as generate a "mark" for an assignment. Thus, evaluation and assessment tend to focus on process over mastery, to build the skill of meta-cognition or "how learning works" within the student (Hase and Kenyon, 2007). Marks can be given for the level of engagement in this cyclical process, including reflective self-assessment, as well as an evaluation on the level of skills competency.

Over time, new expectations for the acquisition of new or more complex skill execution (using the same process) are isolated for assessment and evaluation. The student is expected to continue to participate with less reliance on the supports and more ability to manage the full complexity of the tasks at hand. The final measure of independent mastery includes the student's ability to provide peer-support and leadership to others. Not only does teaching others further reinforcing the learning, it helps build the students skills at meta-cognition or "how they know what they know". Self-reflection and self-evaluation also encourage the ability to take ownership of the learning process.

Adapting to learner diversity:

As described, the constructivist educator is focused not only the subject matter but must also pay attention to the process by which it is learned. Because of its focus on the experience of the learner, constructivism engages in research into student engagement that attempts to reveal connections between the diversity in learning style preferences, abilities and prior experiences and student success (McMahon and Zyngier, 2009). While there is a theoretical continuum of approaches to engagement, constructivist principles expect faculty to not only appreciate but accommodate this learner diversity. Teachers use a variety of instructional and assessment methods to tap into prior learning, evaluate the same learning in a variety of ways, create opportunities for peer support through collaborative learning, and ensure opportunities are embedded within the course design for re-attempts and rehearsal of skills (i.e., reduce the number of single-attempt, "all or nothing" assignments). The ethical imperative inherent to constructivist approaches requires that any judgment about a student's ability or capacity to succeed (the traditional "some have it, some don't" assumption in traditional objectivist models) would not be made without first engaging in a careful self-evaluation by the teacher about the processes used to bring the learners along (Whetten, 2007).

Self-efficacy:

Central to the cognitivist perspective is the idea that a student's self-perception of their learning ability has much to do with their success. Scaffolding is one teaching strategy that aims to address learner diversity by applying important cognitivist concepts of self-efficacy and motivation advanced and applied by Alberto Bandura in the 1970s (Bandura, 1995). Bandura defines self-efficacy as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1995; 2). He argued that one's motivation to act and even someone's affective state have more to do with what they perceive to be true about themselves rather than what others would consider to be "objectively true" about the person. These concepts prompted teachers to look more carefully at student disengagement. Self-efficacy is seen as a relationship, in Bandura's model, between the instructional strategy, the student's cognitive experience of the strategy and their academic performance. All three work together reciprocally. Self-efficacy is strongly connected to motivation. Bandura argued that people who perceive themselves to be ineffective blame their own lack of ability if they fail at a task, whereas those who see themselves as highly effective will blame a failure on a lack of effort or adverse conditions (Bandura, 1995). Teachers in the constructivist model are therefore also concerned with building the student's motivation to engage in learning – building the learner's self-efficacy so that they become resilient life-long learners in the future.

Self-efficacy is most efficiently built by creating experiences where a person can progressively master something independently or with minimal support. Successful performance builds self-efficacy. It relates to scaffolding, as Wood, Bruner and Ross note, because learner must first be able to comprehend that a solution to a problem exists before he or she is able to solve the problem independently (1976). Early exposure to a learning problem with little expectation to solve the problem (i.e., an assignment to first observe or shadow others) would be a scaffolding strategy sensitive to the impact of self-efficacy on a student's capacity to tackle a problem. Scaffolding enables the learner to both witness others model the learning at hand and makes it possible to engage in the task in a limited way initially and move to full mastery over time. This early success is believed to generate self-efficacy and increases personal motivation to continue.

Beyond successful performance and modeling, Bandura found realistic persuasive support is another positive influence upon self-efficacy. Unrealistic encouragement, however, can have a negative effect when the performance results don't match the pep talk given in advance. Negative self-efficacy is debilitating for the learner. Those who have become persuaded that they don't have the capability to perform well will avoid tasks that would challenge them or will give up when difficulty occurs (Bandura, 1995).

Bloom's taxonomy:

Scaffolding appropriately also relates to another well-utilized foundational theory within education – Bloom's Taxonomy (Bloom, 1956). Bloom argued that cognitive learning could be organized into a hierarchy of progressive difficulty that begins with rote memorization of facts (shallow comprehension) through to their creative adaptation in unfamiliar contexts (deep comprehension) (Bloom, 1956). Teachers seeking to appropriately target a learning situation or assessment method use this taxonomy. For example, the rote repetition of a skill or basic ability to identify or define terms is well-suited to multiple-choice/true and false quantitative assessment tools whereas deeper engagement in problem-solving and the creative application of knowledge in new situations is better suited to demonstration and personal reflection methods of assessment that offer the student the opportunity to both show how they'd solve the problem and explain why they chose the solution.

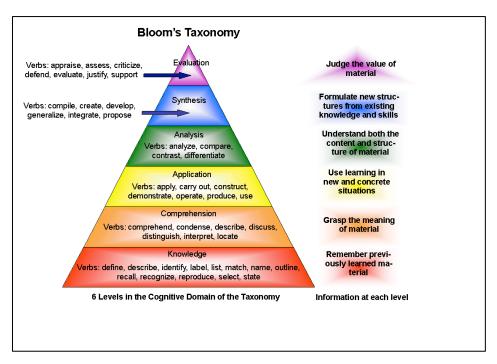


Figure 1: Chan (2010)

Summary of key concepts in the constructivist approach:

In general, learner-centred teachers have internalized the realization that delivering a lecture is not teaching. These teachers recognize learning as a hierarchical pathway of understanding from basic skill mastery at a rote or repetitive level to higher levels of comprehension. Learner-centred instructional design encourage students to move into the domain of student-driven exploration and inquiry in authentic, active and real-world settings. Typical of contructivist approaches is the relinquishing of teacher power (Hase and Keynon, 2007). In androgogy, teachers are the "guides on the side" who set the goals but also structure learning experiences intended to be engaging and provide supports along the way to a wide variety of learners who are viewed as bringing unique and relevant prior knowledge and experiences to the table. As such, constructivist models will often encourage students to work collaboratively with peers to generate solutions and leverage the knowledge already held by the members of the class. This helps to generate environments in which peers can support each other, model the learning expectations and otherwise scaffold the experience to maximize learning and promote active engagement within authentic, real-world educational experiences.

Finally, constructivism requires a reconsideration of what constitutes effective evaluation. Evaluation choices signal to the learner what the teacher considers to be important (Whetten, 2008). Although traditional multiple choice and other quantitative approaches can be used appropriately, more emphasis is placed in learner-centred curriculum on formative assessment

and on qualitative measures such as self-assessment reflective techniques or peer evaluation. The challenge for teachers is to generate relevant and appropriate assessment that effectively supports the learning that is intended, particularly higher order learning in Bloom's taxonomy. The emphasis is on process and helping students grow to become independent problem solvers and inquirers who can adopt and adapt new skills as necessary rather than limit teaching to a discrete set of skills in use today.

Constructivism in Journalism Education literature

Theories of constructivism in education generate some useful guidelines for journalism scholars seeking to evaluate the core practical curriculum from the learner's perspective. It is a truism at this time in journalism education's history that most programs are facing or engaging in curriculum reform (Blom & Davenport, 2012). But a constructivist framework is largely absent from recent academic literature published on the subject of journalism professional practice curriculum reform in light of emerging technology. (As mentioned earlier, this paper does not concern itself with the robust deliberation over the journalist's changing professional role in society or the debates over theoretical versus practical curriculum (c.f. Macdonald, 2006)).

Beyond the broad recommendations of recent "state of the union" report by Bell, Shirky and Anderson (2013), other scholars have written about recent efforts to adapt the professional skills curriculum. Some consider advance convergence models over the traditional, single-platform approach within the reporting and writing sequence (Castaneda et al., 2005). Others are reframing the capstone "working newsroom" course environment in constructivist terms as a site of experiential learning (Brandon, 2002; Steel et al, 2007). Duhe and Zukowski (1997) found considerable support (and Tanner et al. (2012) re-iterated the sentiment of broadcasting faculty years later) that the broadcasting capstone course is necessary in order to ensure a level of skills training remains adequate preparation for jobs in broadcasting. Yet Tanner et al. noted that only half of the programs surveyed had a broadcasting capstone at all (2012).

These authors outline the anxieties created by the reform imperative but appear to do so within the framework of the industrial "mental maps" traditionally applied to discourses surrounding journalism curricula by journalism educators. Without an alternative evaluative schema, which practical skills will be necessary for future journalists and which may shrink in emphasis or disappear altogether remains a speculative exercise at this point. Blom and Davenport (2012) surveyed journalism program directors to determine if there's any consensus on what the core curriculum should contain and found no consensus exists. They offer some suggested models but

do not evaluate them in light of constructivist principles. Some scholars argue the curriculum needs to be freed from industry-driven models and suggest other frames of organizational reference, such as community-building or critical theoretical approaches (Macdonald, 2006; Mensing, 2010). They don't, in turn, consider how that might be practically accomplished. More recent textbooks take an intellectualist journey through journalism practice that attempts to better synthesize journalism practical training with the "why's" generated through inquiry in fields like Journalism Studies (the disciplinary theoretical examination of the profession that emerged in its own right in the new millennium) (Harcup, 2009[2004]). Lynette Sheridan Burns utilizes theories of reflective practice to encourage a more professional orientation to life-long learning (Sheridan-Burns, 2013). While definitely in line with the constructivist perspectives outlined here, theoretical consideration regarding how learning might "works best" from this new intellectualist approach is absent.

Murray notes the three main responses to professional practice curriculum reform are a focus on new curriculum design, implementing convergence opportunities or maintaining the status quo (Murray, 2008). None of the published examples to date offer detailed models that re-consider the curriculum sequence of the core curriculum from the learner's point of view as constructivists might. One reason for this may be the lack of familiarity with the concepts of constructivism and a lack of need to date to reach for new maps to adapt to change. Returning to Peter Senge's conditions necessary for organizational change, he describes mental models as "deeply held internal images of how the world works, images that limit us to familiar ways of thinking and acting. Very often, we are not consciously aware of our mental models or the effects they have on our behavior" (Senge. 1990; p. 8). As mentioned, it appears that single-loop learning – that which utilizes the old knowledge and assumptions to inform new action – has been considered sufficient to adapt to emerging technology over time (Argylis and Schon, 1974). The latest impact of digital media technology, as those outlined by Bell, Shirky and Anderson (2013), would suggest that radical change is both imminent and necessary.

RESULTS: Reconsidering a century-old tradition

What are the assumptions inherent within the "single loop" era of curriculum adaptation to the beginning of the new media era? Examination of the history of journalism education reveals some clues to both the norms and their resilience over time. Most obvious is the presumed purpose of journalism education – employment. Consideration of the journalism curriculum as anything other than job preparation for well-defined employment contexts is a relatively new phenomenon (Mensing, 2010).

Employment context over time explains another foundational assumption within the curriculum – the starting point of print. The original reporting and writing curriculum in North American universities was developed at the turn of the 20th Century when print was the only medium available (Winfield, 2008). Over time, as new platforms were introduced and eventually adopted as sites of journalistic practice, new courses to train students in the new technologies were "bolted on" to the core print-based reporting and writing sequence, building a platform-based curriculum.

It remains routine in many programs to organize professional practice training into courses based upon platforms and starting from a reporting and writing foundation centred in print (Castenada et al, 2005; Blom & Davenport, 2012). A review of popular American and Canadian journalism introductory textbooks reveals that this traditional pathway has also followed a predictable path that presumes a default of a newspaper/print baseline with a common ideological orientation to practice that hasn't changed for decades (Brennan, 2000). New editions of introductory textbooks continue to introduce norms and routines of practice that mirror or mimic legacy organizational/industrial routines (c.f. Lansing and Stephens, 2008; Bender et al., 2011). They mention of convergence and digital journalism but continue to park broadcasting and new media as separate chapters, opened after a foundation is laid from the context of print reporting. The 2005 UNESCO model curriculum also presumes the introductory reporting and writing course (Reporting and Writing Tier 1) "will normally focus on print journalism, [although] the principles and practices may be applied to broadcast and on-line journalism" (UNESCO, 2004; p. 20).

What does this mean from the student perspective? From the first day, the student is presumably writing for a print audience. The print lede is the first lede introduced, the print pyramid structure and print-style use of quotations is the first approach taught for organizing facts. Once the student has moved beyond reporting basics for print, the student is expected to adapt storytelling to these new platforms – the lede becomes the intro, the audio quality of the source's quote now matters as a 'clip', visual considerations and the need to be present at events as they unfold come into play as television skills are introduced. Journalistic storytelling choices must now be made in 2-D (text, sound) and 3-D (text, sound and moving video images) as well as networked hypertext (Huesca, 2000, Jacobson, 2012). In many programs, the curriculum progression typically ends with capstone production courses that may be still be single medium or converged production spaces aimed at job-readiness (Tanner et al, 2012).

Specialization remains a strong pull in the current arguments over curriculum reform. For example, faculty continue to believe students who want a job in broadcasting are compelled to master the technological tools to enable the production of these stories to full broadcast standard (Tanner et al, 2012). Mastery of the technology can take up precious time, as can the demands of learning on-air performance skills, live-to-capture show production routines, and so on. Journalism faculty who teach such technology have argued employers value hands-on training in broadcasting (Duhe and Zukowsky, 1997; Tanner et al, 2012). One case study of students and faculty engaging in a new convergence model in which students wrote across platforms concurrently found both students and faculty worry that the learning is diluted, although actual skill development grew stronger (Castaneda et al, 2005). Other research suggests the industry itself could continue to generate compelling arguments to support those on faculty who seek change. For example, employees arriving with a digital toolbox in hand are becoming more powerful in print newsrooms, with single-platform workers growing increasingly isolated (Robinson, 2011). This sort of evidence becomes the rationale for incorporating social media, CSS, HTML or other web-based skills to the menu.

The industrial platform organizing principle within journalism programs persists across a full range of institutional settings, program lengths and credentials (Knox & Gudrum, 2007; Edge, 2004; Johansen, Weaver & Dornan, 2001). The ideological and ontological assumptions of the industrial platform model have also remained remarkably impervious to critique from the liberal studies side of the theory-practice balance that seeks greater reflexivity within the professional practice curriculum to better respond ad evolve in light of advancements in social and political thought, particularly critical perspectives (Macdonald, 2005). It's core organizing principles have also withstood any threat of radical impact to narrative development created by web hypertext technology (Huesca, 2000). Web, for the most part, became a series of "extras" used to enhance core newspaper principles (Jacobson, 2012).

In sum, it is fair to say that the industry-oriented, platform-centred organizational structure for professional practice courses has proven to be highly versatile. It has been adaptable to the various program structures and lengths used by institutions of higher education to lead to a range of credentials in journalism. It has also been somewhat impervious to changes in disciplinary knowledge occurring outside the professional practice course sequence. There is a growing sense within the literature that journalism educators are starting from the premise that radical change is nigh. However, efforts to either empirically or conceptually explore how adaptation might unpack the foundational curriculum are few and none could be identified that have engaged constructivist educational norms and assumptions to do so.

Remapping a constructivist core curriculum:

The process of unpacking this sequence from a constructivist lens is easiest to begin at the capstone as it is easily translated to constructivist terms. Arguments have been made to reconsider both journalism special project (e.g., election coverage) and capstone production environments as sites of experiential learning because both hold the potential to engage students in an active, "real-world" authentic learning task that also requires higher-order synthesis of information (Brandon, 2002; Steel, 2007; Tanner et al., 2012). The complex work of reporting (from story pitch to publication/broadcast) in these "newslab" environments is complicated work, achieved through collaborative interaction between student peers, the social world (with its sources, events and routines) and mentoring professional faculty. It provides active learning opportunities that are authentic (requirements under constructivist principles to ensure learner engagement). As such, it can easily be reframed to fit many of the definitional requirements for active and collaborative instructional design models (such as experiential learning) that are hallmarks of constructivism. Some attention must be paid to how work is evaluated within these courses, however, to ensure they evaluate higher-order learning and also assess the learning process.

The traditional curriculum typically starts by moving through platforms as they evolved in history (see Figure 2). As mentioned, print tends to be the implicit and assumed "first" platform and the context for introductory fundamentals. A second or third "reporting and writing" class in the sequence that may introduce more story formats or contexts for reporting (e.g., beats like courts, crime or sports). Students typically shift platforms to explore reporting with broadcast technology, formats and routines. These can flow from pitch to studio newcast (such as broadcast or online). Acquisition of detailed skill with technology may receive special focus in courses that may primarily serve to focus on the use of the tool (such as still and video cameras) and editing applications (such as Photoshop in imaging, InDesign for page design or Avid or FinalCut for video editing).

REPORTING WRITING 1 print	ADVANCED WRITING AND REPORTING (likely print)	BROADCAST NEWS (REPORTING WITH BROADCAST TECHNOLOGY AND STUDIO ROUTINES)	LONG FORM (EDITORIAL/ FEATURE) WRITING OR DOCUMENTARY PRODUCTION COURSES	IMAGING AND DESIGN SKILLS (ANCILLARY TECHNOLOGY COURSES)	"NEW MEDIA"WEB SKILLS	NEWS 'LAB' NEWSROOM FULL PROCESS (PITCH TO PRODUCTION) SPACES (CONVERGED OR SINGLE PLATFORM)
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Figure 2: a traditional generic journalism core curriculum sequence

Other courses have been added along the way that may deal with specialized types of reporting (see Blom and Davenport, 2012). The capstone, if available, is where the student is expected to synthesize prior learning and learn to adapt to newsroom routines and deadlines as close to real time as is reasonable.

The learner-centred reporting sequence:

What questions are raised if the introductory sequence is re-organized in order to better align the full sequence of journalism instruction (from introduction to capstone) with learner-centred principles given priority over the platform to be used? As outlined earlier, the task is to organize the progression of curriculum to produce a curricular flow that:

- 1) progresses from tasks that are the most simple to most complex,
- 2) offers opportunities to rehearse basic skills and eventually synthesize component parts into more complex tasks
- 3) offers opportunities to both witness others act accordingly as well as achieve performance success early to ensure engagement and self-efficacy
- 4) encourages opportunity for peer support and collaborative learning spaces to accommodate different learning styles

In order to re-consider courses much like the sequence in Figure 2, one must begin to consider deeply what it means to "do reporting" at the foundational level. Clearly, more is involved than a talent for turning a phrase or a "nose for news".

Unpacking the act of reporting a story

For this exercise, one can imagine the task of reporting as broken down into five abilities (there may well be more) that a student needs to master to accomplish the task of generating a story at

the highest level of Bloom's taxonomy. These five are: knowledge of the social world, critical comprehension ability, media technology skills, writing ability and knowledge of the formats and routines of industrial practice. This paper will first describe these categories and then reconsider them by platform to explore their comparative levels of complexity.

EVERY STORY REQUIRES:							
SOCIAL WORLD KNOWLEDGE	CRITICAL COMPREHENSION ABILITY	MEDIA TECHNOLOGY USE	WRITING ABILITY	INDUSTRIAL PRACTICES KNOWLEDGE			

Figure 3: Skills required for effective reporting

Ability 1 - Social world knowledge: The act of reporting requires the ability to navigate the social world and its structures with some level of sophistication. Novice reporters would have little understanding of routine source-reporter relationships (such as court or municipal beat coverage routines) and need to be socialized into the norms and expectations of their role in those environments. But the quality and complexity of the story novice reporters identifies as a "good story" benefits greatly from prior knowledge of society – social institutions and their structures, the habitual narratives of routine media coverage and other knowledge not explicitly within the reporting curriculum. Critical self-awareness of the relevance of this type of prior experience is important for educators to recognize as a differentiator between students with maturity and/or a solid grounding in liberal arts undergraduate experience and those without. Social world knowledge can generate a significant career advantage for students entering foundational journalism training at the graduate level, for example, over students entering journalism program directly out of high school.

2) Ability 2 - Critical comprehension: Without comprehensive schema about how institutions and events "work", how people behave and other social interactional norms, students aren't necessarily going to ask the "right" questions in interview, or have the sensitivity to know when to press and when to recede in the interaction. Knowing "what's a story" and "what's a good lede" are also dependent upon a student's ability to parse meaning, as is their ability to select the facts

most salient to their story and the presumed audience. Critical comprehension helps students write metaphorically and with resonance for readers and avoid unintentional double-entendres.

- 3) Ability 3 Media technology use: Every platform has its technologies, including the pad and paper. Fail to scribble a quote accurately and the journalist is left vulnerable to error or libel charges with no hard evidence to defend that the quote was accurately transcribed. Cameras need to be accurately set and also need some awareness of the aesthetics of image making. Mastery at digital editing technology for both audio and video takes many hours of diligent rehearsal and exploration before these tools become an extension of the creative self.
- 4) Ability 4 Writing: Every story, including those for broadcast or web, involves some level of expression through text. The ability to write with economy and sophistication in a manner that is clear and accessible can take years to achieve. In the meantime, the mechanics of grammar, style and spelling can get in the way of a good story, as well as debates over shades of meaning with word choice, the flow of ideas and ordering of facts. Writing is highly complex and writing engaging narratives from the basis of fact presents its own challenges.
- 5) Ability 5 Knowledge of industrial practices: Journalists need to understand the terminology and routines related to newswriting and be able to both apply it consistently and with rigour, as well as push boundaries when appropriate. Ledes, headlines, nutgraphs and the effective use of quotes are the domain of print journalism as much as hypertext links and writing for search engine optimization belong to the domain of the web. Knowing how to write an intro (as well as who reads it) and how to script to video is the domain of broadcasting. Routine production formats, methods of newsgathering, design and structural elements must be internalized in order to create stories that 'fit' and 'make sense' as examples of journalism (as opposed to a random blog or writing that is seen as "not journalism").

Foundational reporting - starting with stenography

Each of these elements can become a focus of a daily lesson (such as exercises in which students identify and attempt a wide range of identified "lede" styles for print). But a constructivist curriculum plans for rehearsal and repetition as well as opportunities to apply and adapt basic skills to new contexts. If the course is structured as a series of single exposures to new ideas of formats, students may or may not spend time building their capacity in a manner that moves from rote repetition to interpretation. Advanced journalism, however, requires the ability to think critically. For example, journalists working at the highest levels of professional practice must be able to anticipate the unintended consequences to meaning caused by the strict

application of routine formats, such as binary, conflict-style structures ("he said/she said") or who is routinely given first quote opportunity. The easiest stories could be conceptualized as stenography, with little thought or interpretation expected by the reporter of the information received beyond the expectation to generate an accurate account of events.

The following tasks are examples of routine news work (drawn from my own experience of journalism practice and teaching) that could be defined as stenographic. Most require adherence to strict writing formats, also ordered from the most rigid to the most flexible (within convention). They've been put in order of the degree of the amount of reporting of new information required. The easiest stenographic work is the re-writing of existing text that has been written to conform to routine styles and conventions. The next level would be the extraction of this information in original form (direct reporting) from sources and then using those facts to generate the routine report.

Even at the level of stenography, reporting of new information requires a number of skills to be learned– the ability to contact and interact with strangers and the ability to formulate the right questions to extract all relevant information. Attention to detail and the ability to adhere to routines and conventions of formatting are also elements to be learned. Hidden in the process is the learning about the social world gained by being exposed to the everyday life events and the names and titles of key stakeholders – information that becomes familiar over time.

The top tasks below have been divided into field reporting and desk (office) reporting categories. The field reporting category requires the most interviews and requires the reporter to be on location to find the right sources, but the facts elicited are unlikely to be controversial and the stories produced typically follow routine formats when written as a 'brief' or 'update'. Some may have challenges related to time pressure (i.e., a fleeting event in which sources are available for a short time). Some have challenges related to the seriousness of the content (i.e., the consequences to consider or getting the public account wrong from court). Others require some application of cognitive ability at the level of story selection (i.e., such as the need to parse the city council agenda).

In the desk reporting category, much of the structural and fact choices are done in advance. The content arrives partially prepared according to conventions and routines. No new information needs to be solicited from strangers (unless that's an additional requirement).

Routine brief of a fire or traffic accident

Routine brief of a minor court case

Routine brief from city council

Routine "ribbon-cutting" or other promotional event

Desk reporting:

Writing from a basic news release announcement

Writing from routine "police blotter" releases

Re-writing from wire copy

Re-writing from other published sources

When considering all the stories above, the first observation to make is that the default of print need not be presumed as the only or best starting point. Radio and television reports will cover the same field events and produce stories from the same desk reporting. Unlike a print newsroom, however, radio stations (particularly commercial models) employ reporters to write regularly from packaged (press release) or previously published (wire service or published web or newspaper) material. These stories must be selected the vast information flow (requiring cognitive skills and an awareness of social and industrial norms) and organized into a short newscast. The newscast can then be performed and transmitted over campus or web radio stations (or saved without broadcast at its earliest stage).

Ending with complexity - reporting with autonomy, originality and style

At the other end of the spectrum, it is easy to imagine the work required for a story of greater complexity that is well opposite of stenographic practice. Magazine length features require the capacity to write artfully in an engaging manner, structure narratives appropriately, report and interview with considerable depth and select information for inclusion effectively and with a critical eye. All of the above is helped by as much prior understanding of the subject being explored as possible. Additionally, stories could deeply investigate a controversial subject, including one that leaves the reporter socially castigated by those who are the subjects of the inquiry. The story may require a depth of awareness of documentary production that would enable the artful shooting of effective images and deftness of writing for broadcast that considers sound and the meaning transmitted by images.

The most complex reporting roles in a newsroom, however, aren't limited to the production of a long feature or documentary-style broadcast report. Newsroom leadership in editorial roles involves leading assignment meetings and working with peers to deliberate and develop story

ideas. Determining the day's lineup for any conventional or contemporary platform requires higher-order decision making with strong social world, industrial routine and critical comprehension abilities. Copy editing requires a similar capacity to parse and improve intended meaning, as well as a strong ability to check for adherence to style. The following list is again divided by field and newsroom or desk responsibilities from most complex to least (but still relatively complex).

Field reporting:

Long form investigative

Long form explanatory

Long form personal profile

Medium spot news

Medium hard news – routine source

Medium – special event

Desk – editorially complex tasks:

Managing editor/producers

Assigning editor/producers

Section editors/producers

Researchers – web link expansion

Copy editors

Image or video editors

Page/webpage design/editors

In complex reporting, therefore, it is reasonable to consider two tiers – one in which the student continues to write "up" into longer and deeper storytelling. And another in which the advanced student begins to teach "down", solidifying their understanding of basic and intermediate abilities through the collaborative problem-solving and support with junior students. The former continues to require intensive coaching and support from professional faculty. The latter, however, frees faculty time by engaging students as leaders. Both benefit from "capstone" style, experiential learning environments into which such collaboration can happen with ease.

DISCUSSION: From simple to complex - Moving beyond the platform to a scaffolded reporting and writing sequence

Figure 4 offers one model of how the reporting and writing sequence might be scaffolded to stagger the complexity of the five abilities and build them over time. The resulting sequence

"builds" from the most simple of newsroom contexts and moves to the most complex settings and roles. It directly challenges the traditional reporting and writing textbook approach of beginning instruction from the context of print.

SCAFFOLDED PROGRESSION TO REPORTING SKILL DEVELOPMENT

EXECUTIVE/ OVERSIGHT / SYNTHESIS (DESK EXECUTIVE)							EXECUTIVE AND MANAGING POSITIONS	LEVEL OF (PRINT
					PRINT NEWSROOM EDITOIRAL POSITIONS	RADIO NEWSROOM & SHOW PRODUCER	WEB 'HUB' MANAGING PRODUCER - ASSIGNING & EDITORIAL DECISION MAKING	OF COMPLEXITY (BY LENGTH OF STORY OUTPUT AND LENGTH OF TIME IN THE REQUIRED TO BE SUCCESSFUL)	RADIO
LONG				REPORT MORE COMPLEX PRINT STORIES	RADIO DOCUMENTARY PRODUCTION	ORIGINAL REPORTS USING MULTIPLE ORIGINAL MEDIA	LONGER CURRENT AFFAIRS, SHORT DOCUMENTARY	LENGTH OF STORY O	TELEVISION
			WRITE 2- SOURCE PRINT STORY	PRODUCE 2- SOURCE RADIO (CURRENT AFFAIRS) STORY	WEB STORIES, REPURPOSING ELEMENTS FROM OTHERS	ORIGINAL 1 OR 2 SOURCE STORY PACKAGE		TORY OUTPUT AND I TO BE SUCCESSFUL)	WEB / MULTIMEDIA
MEDIUM		COVER A SPEAKER (PRINT)	FULL RADIO VOICED STORY W/ CLIP (FIELD)	STORIFY TWEETS	IMAGES - SLIDESHOW OR VOICE OVER TO CLIP (VIDEO0			" AND LENGTH SSFUL)	
	REWRITE PRESS BRIEFS FROM RELEASES	RADIO CLIP (FIELD)	LIVE TWEETING	STILL & VIDEO B-ROLL IMAGE MAKING				H OF TIME IN	
SHORT (DESK)	RIP & READ (DESK)	RIP & READ (DESK)	RIP & READ (ADD ORIGINAL CLIPS OF OTHERS)	TV CAST 'NEWS UPDATES	BROADCAST LINEUP PRODUCERS	PRINT ASSIGNMENT EDITORS	WEB/HUB ASSIGNMENT PRODUCERS	THE FIELD	

GRADUALLY INCREASING LEVELS OF ABILITIES OVER TIME ----->

Figure 4: Scaffolded assignments across the reporting & writing sequence

A constructivist would ask: is reporting for print outcomes more or less complicated than reporting for radio outcomes? Radio news stories are traditionally much shorter, containing much less information and requiring many fewer sentences than print coverage. Yet reporters from both platforms can cover the same event. Radio news stories are complicated by production elements for recording quotes (as "clips") and reporter voice-over performance techniques. But if those can be set aside (as they can for a straight news story without clips), it can be said the act of gathering information for the most basic of radio stories provides an opportunity to generate a "complete" story successfully with the least amount of information.

Radio can be further scaffolded by considering the benefit of quick entry into routine morning newcasting to students with novice levels of comprehension about the social world. The use of

"rip and read" style 45-second newscast techniques enables students to gain the thrill of being "on air" as one of their first roles in journalism. They can accomplish this quickly because 1) the social world navigation is already done, as the students can be assigned to use existing newspaper, web and wire copy to generate their radio versions; 2) the critical selection is minimized as the information is already in journalistic format and merely needs re-writing 3) the writing need only satisfy the ear and has few details relating to style, spelling or grammar and 4) strict yet basic routines (including the importance of timing and punctuality) receive early emphasis in the program (which will later extend to more complicated rules such as precision or detailed style conventions).

Once the basics of formats are introduced and some basic awareness of the social world is gained through reading the news to prepare a newscast, students can then go into the field with audio recorder in hand. Now, the art of navigating to sources, interviewing, evaluating transcripts for script selection and writing from originally-sourced material are in play. Detailed writing conventions of print style, spelling and grammar are still soft emphases that can be highlighted as areas to watch for future but not the central focus for success. Stories can easily be created in radio even if the reporting wasn't as extensive or detailed as it should have been.

By the second semester, students who are still novice in field reporting are well-socialized into the campus radio newsroom culture (or the radio arm of a converged newsroom hub). They have met and worked with peers they trust. They can (and do) engage in newscasting work independently. Repeated exposure to the news of the day in this way engages them in the social world and its routines, institutions and newsmakers. Regular newscasting builds an understanding of industrial routines. The students are now more prepared to begin to expand their reporting repertoire across platforms, as well as expand the amount of information needed to generate a complete story.

DISCUSSION AND CONCLUSION: The future of journalism curriculum reform from a constructivist lens

In summary, the introduction of news reporting fundamentals from the context of the radio platform is arguably a means by which to engage in the five elements of storytelling from the most simple and forgiving point of entry into newsgathering. It begins a new sequence that moves from short stories, through to long-form reporting. Starting with short-form gives students the quick adrenaline of success that comes from bringing their work to air. The most basic of radio broadcast – the commercial "top of the hour" newscast –offers very brief summaries of current news stories. It can be generated in a "rip and read" technique that gives

educators some control over the content and ensures much of the critical interpretation is done. The approach scaffolds or supports some of the abilities while focusing on the development of others. This is the philosophy behind the ladder-like progression in Figure 4. Over time, supports are removed as competencies are built.

Engaging a "double-loop" that utilizes constructivist learning theory to create a new mental map generates new "rules" by which to order a curriculum. The new lens challenges the value to the student of maintaining the existing chronological platform progression models. While the shift is radical, it offers some conceptual advantages. Reordering skills from simple to complex brings the curriculum in line with learning theories that encourages self-efficacy and feelings of personal competence. Consideration of the learner's experience helps more students persist. Skills broken down by abilities rather than platform encourages an orientation toward reporting that becomes agnostic of platform, bringing the experience for students closer in line with the growing expectations of the marketplace in which new professionals are required to produce stories seamlessly across all platforms. The process of learning engendered by a scaffolded approach also rehearses the skills needed to continue to learn – the capable graduate, as Hase and Kenyon (2001) defined.

This "frame experiment" is offered as one interpretation of the curriculum under constructivist principles. Many similar experiments may well be underway today, but merely unpublished or undiscovered through the process of the literature review. The scaffolded reporting and writing sequence of assignments that results from this model are only a preliminary step. Actual implementation would require restructuring the learning outcomes of actual courses and generating the lessons to deliver both the content knowledge and the orientation to process constructivism would require. Thus, the frame could face several limitations in practice.

First, the student experience could be quite different if the platforms themselves were, to some degree, operating independent of the curriculum or housed within other courses and fed with content generated by students enrolled in various courses along the sequence. In other words, rather than students in a course in which they generate all components of a magazine from pitch to publication, the course could focus on the proper development of long form writing only – advanced reporting, writing and exploration of deeper social world issues. The product of the course would be the stories themselves, which could be destined for use in a separate course on magazine publishing and editorial leadership. Students enrolled in the production course would work with the "authors" to copy-edit, fact check and shape the stories for publication (developing and rehearsing higher-order intellectual skills in a cooperative manner with the "author"), as

well as be exposed to new knowledge relating to the business of magazine production. This sort of model would require much more cooperation and collaboration between faculty to restructure the curriculum and re-allocate faculty and facilities accordingly.

This relates to the second limitation – the will of the people involved. Faculty's capacity to embrace change and engage in their own reflective work would need to include enough of an education in constructivism and its principles to be convincing. Without widespread adoption of the new assumptive mental map, it would be difficult to rationalize change. Arguments may remain subject to longstanding hierarchies and ideological boundaries separating professional identifies defined by platform. A lack of understanding of constructivist learning principles may make these new ideals unpalatable to faculty accustomed to serving gatekeeping and final filter roles common to traditional education models. Faculty may experience too much cognitive dissonance with constructivism to make the change. Change threatens the perceptual biases associated with the longstanding hierarchy of reporting platforms that assumes broadcasters "can't write".

The goal of a contemporary education in journalism that moves beyond the platform would end the rush to add yet another technological skill to the list. It would lead to the preparation of an individual capable of taking the generic skills of reporting and adapting them effectively to whatever new contexts arise as a result of ongoing innovation in media. As Anderson, Bell and Shirky (2012) write:

Schools should respond by helping students both understand what sorts of specializations they'd like to undertake, and how to go about them, a task that has much less to do with fitting them to particular institutions, as with the old (and now harmful) broadcast vs. print split, and much more to do with fitting them to particular forms of inquiry, wherever and however they practice it. (p. 111)

The paper suggests that a learner-centered imperative yields unique and interesting results as a conceptual tool to anchor curriculum reform exercises in journalism departments in an era of rapid technological change. Constructivist norms and assumptions from the field of education trigger fresh thought on old problems, creating a cognitive pathway to new models and rationales for curriculum sequencing. As demonstrated, new sequences and rationales for skill selection emerge. This "frame experiment" intended to provide an empirically-sound logic upon which educators may transform the journalism curriculum to an era that moves past the platform, yielding more productive and innovative options to the historical tradition of 'bolting on' new knowledge.

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