

Instructional modalities and perspective transformation: How academic librarians' experiences in blended/hybrid, and online instruction influence their teaching identities

As librarians' instructional responsibilities diversify, it is useful to consider what factors influence how they see themselves as educators. In this research, the author used a survey instrument grounded in transformative learning theory to explore what factors librarians who provided online or blended/hybrid instruction felt had impacted their teaching identities. She found statistically-significant differences between these librarians and their peers who provided face-to-face instruction in the relationships, experiences, and professional components that influenced their educator identities. By better understanding these influences, we can more intentionally support academic librarians who teach online or in blended/hybrid environments.

Keywords: information literacy instruction, perspective transformation, teaching identity, hybrid instruction, online instruction

Introduction

Quality online teaching in 21st century higher education involves more than replicating face-to-face instruction in asynchronous ways. Online and hybrid teaching have evolved so that they encompass their own pedagogical approaches for connecting students with content, their peers, and their instructors. Academic librarians have increasingly moved their teaching into these realms and have sought to incorporate these engaging strategies in technology-mediated

information literacy instruction. As they push into these evolving learning environments, it is relevant to consider what factors shape librarians' teacher identities and instructional practices. While there has been research on both academic librarians' teacher (or teaching) identities and the best practices in developing these professional self-concepts in face-to-face settings, the context is different for librarians providing online or hybrid instruction. Moreover, it is useful to consider whether librarians teaching in these two formats – fully online and in blended or hybrid interactions – have the same, or similar, experiences of developing teacher identities both as each other, and as those who provide only face-to-face instruction.

In this research, the author sought to examine the experiences of academic librarians who taught in online or blended learning environments and how they believed they had developed teaching identities, also known as their senses of themselves as educators. She used data collected as part of a large-scale survey to identify what relationships, experiences, and professional components influenced librarians who taught in these settings in different ways than their peers who did not deliver such instruction. In recognizing these differences, we can better understand what academic librarians need to provide high quality, technology-enhanced teaching.

Literature Review

For academic librarians engaged in instruction, how they think of themselves as educators is an important component for their practices. The idea of a teaching or teacher identity is an established concept in the literature around K-122 teacher preparation programs and, to a lesser extent, in research on post-secondary educators' experiences (see, for instance: Friesen & Besley, 2013; Henry, 2016; McNaughton & Billot, 2016; Nevgi & Löfström, 2015; Rahmawati & Taylor, 2018). This research established that teacher identities, or an individual's sense of

what it means for she or he to be an educator, do need to develop and are related to one's personal self-concept.

More generally, these ideas related to professional identity have their roots in psychological and developmental theories. Erik Erikson's exploration of identity pushed beyond the basic question of who an individual considers themselves to be and into unique personal attributes and how they fit into various contexts (Erikson, 1950; Foster, 2011). Erikson's work, and specifically his eight stages of identity development, are relevant to the notion of teaching identities; the seventh stage, generativity versus stagnation, represents a point in adulthood where they can choose whether to explore personal growth opportunities (Erikson, 1994; Herman, 2011). Erikson's core question, "Whom or what can I care for?" may be answered at a personal level, but it can also have social ramifications: Individuals can decide at this phase to learn, grow, mentor, or support beyond their own interests (Poole & Snarey, 2011). Erikson's ideas about identity, then, can be used to understand how individuals think about their work and their places in those systems.

Using identity as a general foundation and teaching identities as a specific structure, it is useful to examine what work exists around academic librarians' senses of themselves as educators. Walter (2008) considered this idea with academic librarians and confirmed that they, too, can develop such professional identities. Moreover, he found that academic librarians ground this part of their work-related self-concept relates to responsibilities within specific institutional constructs (Walter, 2008). Therefore, academic librarians who teach face-to-face may understand their roles as educators in different ways than those who also teach online or in hybrid environments. There are distinct scholarly areas focused on how teaching online or in blended classrooms impacts librarians' educator identities. In the literature focused on all-online

information literacy instruction, three different teaching approaches have emerged. There is library instruction that is embedded in online courses or programs (Mery, Newby, & Peng, 2012; Shepley, 2009; Read & Morasch, 2016). In some cases, this kind of teaching involves a version of embedded librarianship, in which instructional librarians are actually situated in an online course or learning environment (Burke & Tumbleson, 2016; Hoffman, 2011; Usova, 2011; York & Vance, 2009). There is also a well-established body of literature on librarians who develop online learning objects such as freestanding tutorials or instructional videos that are open to all through a library website or guide (Mery, DeFrain, Kline & Sult, 2014; Rutledge & LeMire, 2017; Virtue, Dean, & Matheson, 2014). And there is a small section of scholarship that delves into how academic librarians may engage in instruction as professors for online credit-bearing courses (Burke, 2012; Nichols Hess & Greer, 2016; Raven & Rodrigues, 2017). Depending on the online learning need and context, instructional librarians may use their personal experiences, individual perspectives, and relevant tools to construct their teaching approaches within and across these situations.

The scholarship on how librarians' work in blended classrooms has some overlap with all-online instruction. Blended or hybrid learning more generally includes both face-to-face and online learning components (Kist, 2015). As for how librarians fit into this instructional format, Bell and Shank (2004) identified the idea of blended librarianship, which involved "the traditional skill set of librarianship with the information technologist's hardware/software skills, and the instructional or educational designer's ability to apply technology appropriately in the teaching-learning process" (p. 373). While this concept is broader than just blended or hybrid library instruction, the research on this teaching approach often focuses on how librarians can use a flipped classroom approach – which augments face-to-face instruction with online

resources – to create hybrid information literacy learning experiences (Arnold-Garza, 2014; Garvey, Hayes, & Stempler, 2017; Loo et al., 2016). The blended instruction research often focuses on this mode as a way to use 21st century delivery methods to more fully incorporate changing library resources and address student expectations (Bell, 2011; Bell & Shank, 2004; Burke & Tumbleson, 2016; Shank & Bell, 2011). However, those librarians working in such settings may have unique experiences, needs, or issues when considering their teaching identities.

Other researchers, then, have established the concept of identity and the specific notion of a teacher identity as an area where individuals can develop a professional sense of themselves. Educators in K-12, post-secondary, and library settings may develop these teaching identities, in part based on their hands-on experiences and interpersonal interactions. Academic librarians who engage in online or blended/hybrid instruction may have unique contextual frames for these experiences and relationships. Therefore, this scholarship helps us to identify several salient themes for this research. Different instructional modes offer varied ways academic librarians can engage in teaching, and these diverse contexts may impact how they define themselves as educators. Developing a fuller understanding of these components – including where they differ, how they are similar, and what effects or inputs are especially important for different groups of instructional librarians – may help us to identify the best ways to support the varied librarians presently engaged in information literacy instruction and instruction librarians-to-be.

Methods

In her research, the author took on an exploratory perspective with a data collection instrument that generated information from a large group of respondents. She selected this approach to collect deductive data, at a large scale, to understand the teaching identity concept across

academic librarianship more generally. The author collected a large data set that provided a wide range of information on a number of teaching-related topics; as such, she has selected meaningful areas for focused analysis and shared her components of work in other venues (Nichols Hess, 2018a, 2019, 2020a, 2020b). While the findings she presents here are unique, there is considerable methodological overlap in her data collection and cleaning processes (Nichols Hess, 2019, 2020a, 2020b). The analytical methods, though, are unique for the variables she examined for this article. Therefore, much of the information about her research approach and procedures has been shared elsewhere.

Survey Instrument and Distribution Procedures

The author modified Kathleen P. King's (2009) Learning Activities Survey to collect data on academic librarians' perspectives about their instructional identities (see the supplementary file). This instrument is grounded in transformative learning theory (Mezirow, 2000) and the conceptual approach that adults' mindsets can change. This concrete idea, which is called perspective transformation (Mezirow, 1978), fit the author's theoretical approach because she sought to explore academic librarians' beliefs about what had influenced their thoughts of themselves as educators.

Much of the existing research on transformative learning is qualitative in nature or case-based, so the author selected a deductive research approach to generate a broader picture of whether academic librarians believed they had experienced perspective transformation around their teaching. She selected King's (2009) instrument because it had been validated and demonstrated to be reliable; King also provided modification guidelines when developing this version of the survey to maintained this validity and reliability while addressing specific groups' experiences. The author adhered to King's (2009) guidelines and did not change the questions

related to whether participants believed that perspective transformation had occurred, except to add library-specific language.

The author obtained approval from her institutional research board and used Qualtrics to build the instrument and collect data; she sent it to the acrlframe-l, ili-l, and infolit-l listservs hosted by the American Library Association. The survey was open to participants from February 2017 until April 2017, and individuals only had to be currently working in a job that included information literacy instruction to participate. A total of 501 individuals ($n = 501$) responded, in part or in full. Individuals could elect to participate in the survey by completing an Informed Consent question at the beginning of the instrument.

Research Participants

Since the author's goal was to explore academic librarians who believed they had developed teaching identities, she only used responses in her analyses of those individuals who indicated they had undergone changes in their thinking. Again, the author followed King's (2009) guidance on how to identify these respondents. She reviewed all responses to the items related to whether they believed they have experienced perspective transformation and generated perspective transformation index (PT-Index) groups (King, 2009). These groups reflected which individuals reported experiencing perspective transformation around their teaching identities and established a sub-group of participants the author used for subsequent analyses (as discussed in Nichols Hess 2018, 2019, 2020a, 2020b).

The author began by identifying individuals who had checked at least one of the affirmative statements in response to Item 14 ("Think about your professional experiences in teaching – check off any of the following statements that apply"), or who had indicated "Yes" or "I'm not sure" in response to Item 15 ("Since you have been providing information literacy

instruction, do you believe you experienced a time when you realized that your values, beliefs, opinions, or expectations changed?”). These individuals comprised the YES PT-Index group. Individuals who had not selected any of the affirmative statements about transformation in Item 14, or had indicated “No” to Item 15, comprised the NO PT-Index group. The author then reviewed respondents’ free-text comments for Items 16 (“Describe what happened when you realized your values, beliefs, opinions, or expectations about your instructional responsibilities had changed.”) and 20 (“Think back to when you first realized that your views or perspective had changed. What did your professional life have to do with the experience of change?”) to affirm or modify these assignments as needed. From the initial pool of 501 respondents, 353 participants remained in the YES PT-Index group. These individuals indicated that they believed they had experienced transformation around how they thought of themselves as educators. The author excluded all individuals in the NO PT-Index group from any additional analyses (as discussed in Nichols Hess 2019, 2020a, 2020b).

Analytical Preparation: Principal Component Analysis

Using the data from the YES PT-Index group (n = 353), author then sought to identify what factors respondents believed had influenced their teaching identity development processes. On Items 17-19 of the survey instrument, participants identified the relational (item 17), experiential (item 18), and professional (item 19) inputs they felt had influenced their teacher identities. There were 41 potential options across these three items, some of which had overlap across questions; nonetheless, participants could select all that applied. The author found that meaningful statistical analysis could not be done between each individual input and librarians’ online or blended instruction experience. Instead, she used SPSS to perform a principal component analysis using Varimax (orthogonal) rotation followed by a subsequent confirmatory

factor analysis to identify broader transformative constructs from these 41 inputs. These analytical procedures helped the author determine where participants had selected common variables in response to the items (as discussed in Nichols Hess 2019, 2020a, 2020b).

The principal component analysis reduced 40 of the 41 variables into 12 transformative constructs, with one remaining variable not aligned to any construct. The author used the resulting confirmatory factor analysis to identify these constructs, which had eigenvalues greater than 1.0 and significant factor criterion of at least 0.4. She then used the inputs within each construct to identify their core ideas. These 12 constructs, as well as the original item to which they aligned, are represented in Figure 1. In this analysis, each input aligned with only one transformative construct, but one experiential input – teaching face-to-face – did not align with any other constructs. The author maintained this input as a categorical variable (e.g. Yes/No) in subsequent data analysis. Using this cleaned-up data, the author examined whether there were differences between librarians with varied instructional modalities and their beliefs about their teaching-based perspective transformation (as discussed in Nichols Hess 2019, 2020a, 2020b).

[INSERT FIGURE 1 HERE]

Analytical Preparation: Generating Standardized Z-Scores

As a last step before examining the relationships between participants' instructional modalities and the 12 transformative constructs, the author had to transform participants' (n = 353) combined responses for each construct into composite scores. This process was necessary because each construct was comprised of different numbers of variables (as indicated in Figure 1). This process allowed the author to more accurately examine how the 12 constructs had influenced perspective transformation around teaching identities. The author used SPSS to convert participants' (n = 353) now-compiled responses for each of the 12 transformative

constructs into standardized Z-scores. In a Z-score, 0 represents the mean and one unit indicates a standard deviation in the sample. The author could then calculate the probability of a score occurring within a normal distribution from these standard scores. She used these Z-scores with statistical tests in SPSS to analyze whether the 12 different constructs affected participants' beliefs about teaching identity transformation in relation to their instructional modalities. The author did not convert participants' response to the remaining variable of whether teaching face-to-face impacted their teaching identity development (as discussed in Nichols Hess 2019, 2020a, 2020b).

Data Analysis: Independent-Sample T-Tests and Crosstab

The author used independent-sample t-tests to consider whether statistically-significant relationships existed between participants' instructional formats (e.g. face-to-face, blended/hybrid, online) and the 12 transformative constructs. An independent-sample t-test compares means with two self-contained groups in relation to a single dependent variable. This test allows researchers to examine the relationships between categorical independent variables – so, whether an individual engages in instruction in a certain format, for example – and a continuous dependent variable, represented as points on a fixed scale. In this research, participants' responses to the questions about their instruction in different formats – the independent variables – were categorical (Yes/No). The compiled data for the 12 transformative constructs were continuous data because participants' responses were transformed into Z-scores. The author used the standard alpha level of .05 to argue for significance for this analysis.

The author used SPSS to run cross-tabulation analysis with a chi-square test statistic to consider this input's relationship to librarians' teaching identity development. This type of analysis determines whether statistically significant relationships exist between categorical

independent variables (e.g., different instructional formats) and categorical dependent variables (i.e., whether teaching face-to-face had influenced perspective transformation). The author used the standard alpha level of .05 to argue for significance in this analysis.

Findings

Participants self-identified whether they engaged in blended/hybrid or online instruction; these options were not mutually exclusive. Of the respondents who had experienced perspective transformation ($n = 353$), 158 individuals indicated that they provided blended or hybrid instruction, while 195 individuals did not indicate that they provided such instruction. In terms of online instruction, 181 individuals indicated that they engaged in this teaching modality, while 172 individuals did not indicate that they provided such instruction. These percentages are represented in Figures 2 and 3, respectively.

[INSERT FIGURES 2 AND 3 HERE]

Blended or Hybrid Instruction

The author found that there were statistically-significant differences between librarians who engaged in blended or hybrid instruction ($M = 0.19$, $SD = 1.53$) and those who did not engage in blended or hybrid instruction ($M = -0.16$, $SD = 0.78$); $t(351) = 2.84$, $p = 0.01$ and the effects of the motivating leaders construct on teaching identity transformation (see Table 1). She also found statistically-significant differences between librarians who did ($M = 0.30$, $SD = 1.38$), and those who did not ($M = -0.03$, $SD = 0.90$); $t(351) = 2.76$, $p = 0.01$, engage in blended or hybrid instruction and the impact of the other important relationships construct on their teaching identity development (see Table 2). Furthermore, the author found statistically-significant differences between librarians who engaged in blended or hybrid instruction ($M = 0.53$, $SD = 1.45$) and those who did not engage in blended or hybrid instruction ($M = -0.22$, $SD = 0.72$); $t(351) = 6.31$,

$p < 0.001$ (see Table 3) and the effects of the writing and technology-rich teaching construct on their perceived teaching identities. Finally, she found that there were statistically-significant differences between librarians who did ($M = 0.33$, $SD = 1.21$), and those who did not ($M = 0.04$, $SD = 1.02$); $t(351) = 2.50$, $p = 0.01$, engage in blended or hybrid instruction and how the other shifting responsibilities construct impacted their teaching identity transformation (see Table 4). These results suggest that participants who provided blended or hybrid instruction found these constructs to be more influential in how they thought of themselves as educators than their counterparts who did not teach in blended or hybrid environments.

[INSERT TABLES 1-4 HERE]

The author also used a chi-square test of independence to examine whether there were relationships between whether participants engaged in online instruction and the impact of teaching face-to-face on teaching identity transformation. There was not a statistically significant relationship between these variables, $X^2(1, n = 353) = 1.59$, $p = .21$. These data suggest that librarians who do, and do not, provide blended or hybrid instruction consider the impact of teaching face-to-face similarly in terms of their teaching identity transformation.

Online Instruction

The author found that there were statistically-significant differences between librarians who engaged in online instruction ($M = 0.16$, $SD = 1.40$) and those who did not engage in online instruction ($M = -0.17$, $SD = 0.89$); $t(351) = 2.66$, $p = 0.01$ and the effects of the motivating supervisors construct on their teaching identity transformation (see Table 5). Similarly, she found that there were statistically-significant differences between librarians who did ($M = 0.30$, $SD = 1.27$) and those who did not ($M = -0.07$, $SD = 0.97$); $t(351) = 3.01$, $p = 0.003$, engage in online instruction and the impact of the other relationships construct on how they thought of their

teacher identities (see Table 6). Finally, the author identified statistically-significant differences between librarians who engaged in online instruction ($M = 0.41$, $SD = 1.39$) and those who did not engage in online instruction ($M = -0.19$, $SD = 0.76$); $t(351) = 5.05$, $p < 0.001$ in the effect that the writing and technology-rich teaching construct had on participants' perceived senses of themselves as educators (see Table 7). These results suggest that participants who taught in online settings believed that these constructs had been more influential in how they thought of themselves as educators than their counterparts who did not teach online.

[INSERT TABLES 5-7 HERE]

The author also used a chi-square test of independence to examine whether there were relationships between whether participants engaged in online instruction and the impact of teaching face-to-face on teaching identity transformation. There was not a statistically significant relationship between these variables, $X^2(1, n = 353) = 2.36$, $p = .12$. These data suggest that librarians who do, and do not, provide online instruction consider the impact of teaching face-to-face similarly in terms of their teaching identity transformation.

Discussion

These research findings imply that academic librarians who teach in online or hybrid settings find different relationships, experiences, and professional components to influence how they think of themselves as educators than their colleagues who teach face-to-face. Exploring what these differences mean, in more concrete terms, can help us to identify takeaways for our profession and future research avenues.

For librarians who taught in either hybrid or online instructional settings, there were considerable commonalities in the constructs they considered as influential to their teaching identities. This is perhaps because there is overlap in these participant populations; outside of

overlap, though, these individuals may have similar instructional experiences. Unlike their library colleagues who did not teach in these environments, those who taught online or in blended formats cited different relationship-based influences – from supervisors, administrators, and others who they identified – on their senses of themselves as educators. Moreover, their external actions – that is, their actual practices of teaching in blended or online environments – informed how they developed their teaching identities. These relationships and actions may take on distinctive characteristics with hybrid or online or learning, which is perhaps why they have a disparate impact on those individuals who teach in these kinds of environments. For example, the librarian who develops their skill for the online realm may have to more carefully consider what they consider to be “teaching” outside of direct, synchronous interaction with students; they may then also consider how they manifests those behaviors in their work. Or, the librarian who embeds their instruction in hybrid classes may have different kinds of interactions with library or campus administrators who are more invested in, or aware of, institution-level efforts to grow a range of learning options. The unique features of their working conditions, then, may shape the differences in how librarians who teach online or in blended environments develop senses of themselves as educators.

Librarians who provide blended or online instruction may find it beneficial to seek out targeted relationships, experiences, or professional settings to develop their teacher identities. For these information literacy educators, that may involve developing meaningful connections with leaders at their institutions, perhaps especially those in instructional technology-centric positions, and reflecting specifically on their technology-driven teaching. Seeking out these focused practices and interpersonal connections may help those librarians who engage in hybrid or online instruction – or those librarians who want to engage more frequently in this kind of

teaching – to develop teaching identities that reflect the full range of their educational practices. Here, too, academic library administrators and supervisors can facilitate this growth by supporting these relational and experiential learning experiences for academic librarians who have such instructional responsibilities.

Future Research & Conclusions

In this research, the author explored what factors that librarians who engaged in online or blended/hybrid instruction believed had influenced their teacher identities. She considered whether there were specific constructs that these individuals identified as important to their senses of themselves as educators that their peers who taught face-to-face did not find relevant. There were statistically-significant differences for academic librarians who taught in these technology-mediated modalities for the impacts they believed that motivating leaders, other important relationships, writing and technology-rich teaching, and other shifting responsibilities had on their teaching identities.

While this study collected belief-based self-reported data, it does present suggestive results that may merit further investigation. For example, future researchers may find it beneficial to consider what particular interpersonal relationships, or what types of professional responsibilities, most directly influence the teaching identities of academic librarians who provide online or hybrid instruction. Additional scholarship that looks more carefully at librarians' online and/or blended instruction in focused or deeper ways could develop a fuller understanding of these experiences. Having a better understanding of why – and how – certain factors differently influence these academic librarians' teaching identity development can provide guidance for fostering intentional professional growth for librarians who teach in

technology-rich environments. Such an intentional focus can help instruction librarians while supporting students, faculty, and staff.

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