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## The Cynefin Framework: A Retrospective Application to University Library Leadership COVID-19 Responses

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## The Cynefin Framework: A Retrospective Application to University Library Leadership COVID-19 Responses

### Abstract

The purpose of this paper is to investigate how university library leadership retrospectively applied the Cynefin framework to COVID-19 responses. Developed using the principles of complexity theory, the Cynefin framework is a sense-making framework that assists those who use it with decision making in ordered and un-ordered situations. The framework comprises five domains: (a) clear, (b) complicated, (c) complex, (d) chaotic, and (e) aware and confused. Because problems are ever-evolving, the cyclical nature of the Cynefin framework allows for and encourages transitions between domains. Through reflection on their experiences during the pandemic, library leaders can utilize the framework's tenets to make future decisions.

### Keywords

Cynefin framework, library leadership, COVID-19

## Introduction

In an unprecedented decision on March 17, 2020, Kansas Governor Laura Kelly closed schools to slow the spread of COVID-19 which compelled university library leaders across the state to adjust protocols overnight. Such a move disrupted education, vaulted students and staff into the unknown, and forced library leaders to explore novel methods to support patrons. Had library leaders implemented the Cynefin framework at the beginning of the pandemic, the adjustment to new protocols could have been less turbulent. Research on the Cynefin framework has been conducted in multiple disciplines including United States presidential policymaking (O'Neill, 2004), health promotion (van Beurden et al., 2011), ergonomics (Elford, 2012), electronic records management (Childs & McLeod, 2013), HIV/AIDS risk-reduction (Burman & Aphane, 2016), biomedical research (Kempermann, 2017), and many others. However, no research has focused on university library leadership and the Cynefin framework. The purpose of this case study is to investigate how university library leadership retrospectively applied the tenets of the Cynefin framework to reflect on the sense-making process of COVID-19 responses.

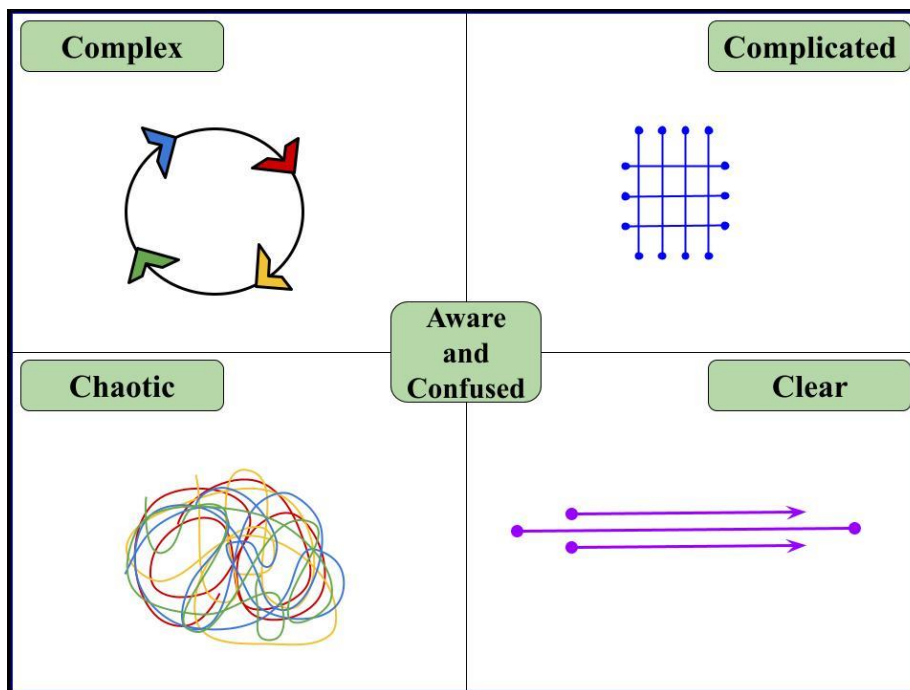
## The Cynefin Framework

With roots in complexity theory, the Cynefin framework is a sense-making framework that assists those who use it with decision making in ordered and un-ordered situations. While ordered situations have linear, predictable, cause-and-effect patterns, un-ordered situations are nonlinear and exhibit patterns similar, but not exact, to those that have already been studied (Kurtz & Snowden, 2003; Rosen, 1991). Because complexity theory suggests that systems operate on the edge of chaos in both ordered and un-ordered situations (Pina E Cunha & Vieira Da Cunha, 2006), they operate outside linear relationships to continuously organize and reorganize, causing new properties and behaviors to emerge (Morrison, 2002). The notion of emergence highlights a system's ability to forego predictability, as the process is a continuous pattern of reaction and reflection (Mason, 2008). Subsequently, the Cynefin framework allows leaders to effectively make sense of emerging problems within their organizations.

Drawing from the tenets of complexity theory, the Cynefin framework can assist leaders in choosing the correct path to success or in reflecting on past decisions that help inform future decisions. It is in this way that ordered and un-ordered situations converge and diverge at various points in time, as the Cynefin framework is cyclical in nature. As data is collected and reflected upon, Cynefin is applied, and the situation is re-evaluated. Figure 1 demonstrates each domain.

**Figure 1**

*The Cynefin Framework*



*Note:* This figure demonstrates each domain of the Cynefin framework. In the clear domain, solutions to problems are linear and observable by all. In the complicated domain, solutions to problems are linear but only observable by some. In the complex domain, solutions are nonlinear and are only evident in hindsight after reflection. In the chaotic domain, solutions are nonlinear and entirely unobservable. In the aware and confused domain, leaders are unsure in which domain they should place their problem. Adapted from *The Cynefin Framework* (2020).

The framework comprises five domains: (a) clear (formerly simple or obvious), (b) complicated, (c) complex, (d) chaotic, and (e) aware and confused (formerly disorder) (Childs & McLeod, 2013; Kempermann, 2017; Kurtz & Snowden, 2003; McCollum & Shea, 2018; McLeod & Childs, 2013; van Beurden et. al, 2011). The clear domain is an ordered domain with known and familiar cause and effect relationships (Childs and McLeod, 2013; Kurtz & Snowden, 2003; McCollum & Shea, 2018). This domain operates on best practices where situations are categorized and reacted to accordingly. Often, there is only one right answer that can be repeated with precision (Kurtz & Snowden, 2003). Likewise, the complicated domain also relies on cause and effect, but the path to a solution is less familiar. Complicated situations remain in the ordered category, but the path to the solution relies on expert knowledge (McLeod & Childs, 2013; van Beurden et al., 2011). The complicated domain differs from the clear domain in that leaders may not have the knowledge needed to make decisions themselves, but they are able to seek out experts who do have the correct answers.

Situations that fall into the complex domain are unknown, can be ordered or un-ordered, and operate in hindsight. Because cause and effect relationships are not reliable in this domain, solutions emerge from reflection rather than from expert experiences. When patterns are identifiable, leaders must navigate without the ability to consult expert advice. Furthermore, the chaotic domain represents the unknowable links between cause and effect (Childs & McLeod, 2013), and leaders must regain control of the turbulence of the situation. Unfortunately, situations in the chaotic domain are often hidden among those

in the complex domain, so crisis intervention must first be applied to events in the chaotic domain before leaders can sense and respond (Kempermann, 2017; McLeod & Childs, 2013). The goal of situations in the chaotic domain is to mitigate the circumstance in order to place the problem into a different domain.

The last domain is the un-ordered aware and confused. In this domain, leaders are unsure which domain should be applied to the situation and often gravitate toward the domain in which they feel most comfortable. For example, Kurtz and Snowden (2013) explain that “the most comfortable with stable order seek to create or enforce rules; experts seek to conduct research and accumulate data; politicians seek to increase the number and range of the contacts; and... the dictators... seek absolute control” (p. 470). Consequently, leaders can utilize the Cynefin framework to navigate a variety of challenges by identifying the appropriate domain for each specific situation.

### **Methodology**

This case study focused on applying the principles of the Cynefin framework to a Midwestern university’s COVID-19 response in order to reflect on decisions. Three library leaders were interviewed via email, and interview questions were retrospective. The Cynefin framework was a new concept to interviewees, so participants were provided with framework information and resources prior to the interviews. The intent was to gain a more in-depth understanding of the procedures and protocols of the library before and at the beginning of the COVID-19 shutdown. Each participant was sent individual emails with the following guiding question: “How could university library leadership and management have utilized the Cynefin framework to address COVID-19 challenges?” Participants then directly responded to the following preliminary questions. Each participant’s responses opened dialogue for further questions and clarification.

- What did a typical day look like for you at the library prior to the COVID-19 shutdown?
- How did you mitigate the initial chaos when campus shut down?
- What experts outside library personnel did you connect with to continue to provide library services to students after the campus shut down?
- In hindsight, what would you have done differently to help things run more smoothly?

### **Findings**

Four themes were identified from the participants’ responses: (a) daily procedures, (b) open communication, (c) planning for the unplannable, and (d) uniformity. These themes coincide with the clear, complicated, complex, and chaotic domains of the Cynefin framework.

#### **Clear: Daily Procedures**

When working in the clear domain, people are familiar with their surroundings and comfortable with day-to-day routines. Prior to the pandemic, the library did not have a set routine every day but rather balanced meetings, events, and interacting with patrons as needed. Library leaders and staff operated primarily on-site and in-person. Typically, between 25 and 100 students utilized spaces to study or to print documents needed for classes, but each participant noted spending extensive time each day interacting with both patrons and colleagues. In addition, each participant explained that email was an integral part of their day, both before and after the shutdown, as constant communication among and between departments was crucial to a smoothly-run library. Because educational institutions were barred from providing in-person services to most students, participants explained that the easiest part of this transition was implementing already-honed procedures that

provided some routine to the work day. One participant explained it this way: “Trees cannot become trees without first having roots. We worked with what we had and birthed something new once we solidified our tried-and-true procedures.” Because email, instant messenger chat, and phone monitoring were already part of daily routines, participants were able to transfer a sense of normalcy in order to launch novel procedures that catered specifically to the new normal.

#### **Complicated: Open Communication**

The complicated domain relies on experts who have experience in various specialized fields or programs; rather than operate primarily within the library’s system, participants stepped further outside it. Prior to COVID-19, library leaders worked with outside organizations who did not have direct influences on day-to-day organizational operations. With the shutdown, however, leaders were forced to become creative. For example, the university’s online campus provided insight for conducting education remotely. Campus safety officials, the local health department, and the Centers for Disease Control and Prevention also provided guidance on expectations for mask-wearing enforcement, social distancing, and new cleaning procedures. Neighboring universities shared their successes and challenges with curbside pickup programs which had not previously been implemented at this university. The library’s website and social media were utilized to communicate how library services could be reached, so information was easily accessible by patrons. Subsequently, the library was able to expand available resources by collaborating with other disciplines, and, metaphorically, doors that had never previously been considered as viable means of communication were now opening. Upon reflection, participants explained that the new interconnectedness is one of the positive aspects borne from the pandemic.

#### **Complex: Planning for the Unplannable**

Because each person had unique struggles throughout the shutdown, tailoring specific remedies to fit each individual was nearly impossible and operated within the complex domain. In the situation of an unprecedented international pandemic, library leaders were unprepared for certain challenges that had previously never been a problem. For example, many students did not have consistent or affordable access to transportation to travel to the library from their homes across the country. One participant explained, “One of our biggest challenges involved trying to help students access physical textbooks. In retrospect I would have advocated... [to] send emails to all faculty to ask them to stop requiring access to physical textbooks and to use freely available materials instead.” In this instance, the participant noted that communication could have been conducted more effectively. Another participant explained that the layout of the library to accommodate social distancing was not always conducive to each student’s learning style. Only after conversations with multiple individuals who supplied varying perspectives did the library finally decide on a layout that best fit student needs. Other problems arose including the sudden limited access to on-site facilities. With the transition to working from home, many staff required hotspots which were often difficult to quickly access due to increased demand from other organizations who also required the majority of employees to work remotely. While problems within the complex domain do not have immediate solutions, library leaders can reflect on experiences during the pandemic to transition once complex issues into future complicated issues.

#### **Chaotic: Uniformity**

Finally, the chaotic domain aims to mitigate the situation through crisis intervention. Many participants stressed the importance of communication throughout the transition from on-site to remote library services. To alleviate anxiety and confusion over such sudden change, library leadership increased professional development using Zoom and Microsoft Teams in

an attempt to quell uncertainty over an increasing number of unknowns. As a result, leadership and staff became more comfortable with technology and the quickly changing methods of disseminating new information. This professional development included identifying immediate needs for staff, services, and buildings; focusing on communication with patrons; and establishing next steps amidst ongoing recommendations from health officials. Because the university has multiple library locations, leadership at the main library emphasized the need for consistent policy implementation at each. One participant explained that departments within the library system looked to the main library and “followed their lead” regarding new protocols. This uniformity offered stability for patrons regardless of which library they visited. In the case of COVID-19, the university library was almost completely unprepared to close its doors while still holding the responsibility of serving patrons. To mitigate the crisis, uniformity between libraries was crucial to ensuring the system did not collapse.

### **Discussion**

Although the Cynefin framework was applied to the university library leadership’s response to the COVID-19 shutdown in retrospect, reflection after such an unprecedented event provides an opportunity for critical reflection on decisions that could inform processes for future problems. In situations that can be categorized into the chaotic domain, the goal is first to mitigate the crisis in such un-ordered, unknowable circumstances, and library leaders had no way of knowing the trajectory of the virus. After closing its doors to patrons, library leadership’s crisis mitigation efforts primarily included a needs assessment, effective communication, and uniform protocols across locations to reduce confusion for both staff and patrons. Therefore, in chaotic circumstances, the goal of library leaders should be to attempt to transition the issue into the complex domain.

After the initial crisis was addressed, library leadership encountered complex problems including social distancing-friendly library layouts, sanitation procedures, and remote library services that could not have been predicted. However, they were able to reflect on their past experiences to shape their subsequent operations. Future library leaders will be able to shift these complex problems into the complicated domain, as current library leaders are now experts. Additionally, future organization decisions should focus on applying as many defined procedures and routines as possible to place problems in either the complicated or clear domains. This ensures continuity for both staff and patrons, offering a sense of predictability in the face of uncertainty. While operating within situations in the un-ordered complex and chaotic domains does not indicate the failure of an organization, performing in the ordered complicated and clear domains allows for knowable solutions to problems. However, for a new problem or situation to become knowable, it must first be experienced in the complex domain where there is time for reflection on which solutions worked and which did not.

### **Conclusion and Limitations**

Although the Cynefin framework was applied in retrospect to library leadership’s initial response to the COVID-19 pandemic, its implications are still impactful for future library decision making. Retrospective consideration can help cultivate deep reflection to inform future organizational operations despite the framework’s application after the shutdown unfolded. Cynefin framework processes were also new to participants, which could have impacted their responses. In addition, a meta-ethnography has not been conducted to determine the efficacy of the framework as a cross-discipline decision making tool, and further study would create a holistic view of the framework’s effectiveness across disciplines.

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