Thinking Style Preferences Among Academic Librarians: Practical Tips for Effective Work Relationships

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Introduction

Thinking is like breathing—we take it for granted (Parlette, & Rae, 1993). But how we think is just as vital to our success as leaders in the library profession as breathing is to life. A person's thinking style is an interactive mix of inherited tendencies and conditioned responses to early behavioral experiences. As a result, each person favors a particular method of thinking (Harrison & Bramson, 1984).

This paper, and subsequent ACRL conference presentation, is an executive summary of a doctoral research study that investigated the popular assumption that public service librarians and technical service librarians think differently. The information presented in this paper is organized into four sections: (a) description of the research study; (b) theoretical, descriptive, and background information concerning thinking styles; (c) conclusions of the study; and (d) practical applications.

Part I: The Research Study

This first section introduces the research problem, provides a brief explanation of the research methodology, describes the data analysis techniques, and concludes with highlights from the findings of the study. This completed research study was conducted in partial fulfillment of an education doctorate from the Florida Atlantic University, College of Education, Department of Educational Leadership.

The purpose of this study was to scientifically investigate whether differences in thinking styles exist between senior level library administrators working in public and technical service areas in libraries with an institutional membership in the Association of Research Libraries (ARL). Sample size was determined by a power analysis, which calculated that a mean score of 66 dyads (132 participants) was required in order to avoid a Type II error (failing to reject a false null hypothesis).

Once sample size was determined, 66 ARL institutions were randomly selected. Of the randomly selected libraries, the Assistant Director for Public Services and the Assistant Director for Technical Services were then mailed a packet of survey materials. If the Assistant Director for Public Services was not available, the packet was sent to the Head of Reference. If the Assistant Director for Technical Services was not available, the packet was sent to the Head of Cataloging.

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The packets included a brief explanation of the study, a consent form, a demographic data form, and a copy of the Inquiry Mode Questionnaire (InQ). Because of the nature of the study, confidentiality, but not anonymity, could be guaranteed to participants. Despite this concern, an 80.3% (106) return rate was achieved. Due to incomplete demographic data forms or improperly completed InQ instruments, a total of 97 surveys were used for the data analysis.

Data analyses included five analyses of variance (ANOVAs) to determine relationships, differences, and interactions based upon the subject's administrative role (public or technical), gender (female or male), and thinking style preference (synthesist, idealist, pragmatist, analyst, or realist). The dependent variable associated with this study was thinking style preference (synthesist, idealist, pragmatist, analyst, and realist). The two independent variables associated with this study were administrative role (public or technical service) and gender (female or male). As part of the ANOVA process, the interaction between gender and administrative role was analyzed. Data analysis also included descriptive information analysis, a cross tabulation computation, and a dyad comparison.

Using a .05 alpha level, none of the 15 null hypotheses could be rejected based upon the ANOVA statistical computation. However, the cross-tabulation and dyad analysis did reveal several noteworthy findings. These findings included: (a) an indication for a strong naturally occurring ability for developing the flat thinking style existed among librarians participating in the study; (b) the relationship between gender and thinking style needed further investigation; (c) the relationship between area of administrative responsibility and thinking style needed further investigation; and (d) a significant difference (84.4%) in preferred thinking styles existed among administrative peers working in the same institution.

Part II: Theoretical, Definitional, and Background Information Concerning Thinking Styles

The second section of this paper provides additional theoretical, definitional, and background information concerning thinking style research. This section focuses upon the InQ instrument developed by Harrison and Bramson in 1977, and revised in 1980. Definitions for six specific thinking styles are provided, with detailed information concerning the strengths and weaknesses of these styles highlighted in three informational tables.

Believing that differences exist among cognition, learning, personality, and thinking, Harrison and Bramson (1982) began investigating inquiring systems in the 1970s. As part of their research investigation, Harrison and Bramson conducted a series of seminars. From these seminars they inferred that the incongruities between learning and thinking were attributed to individual differences in ways of thinking rather than to attributes of personality (Bruvold, Parlette, Bramson, & Bramson, 1983). Interested in the disparity they noticed between cognition and behaviors exhibited during in the decision-making process, Harrison and Bramson (1982) reasoned that thinking styles were integrated collections of perceptual and conceptual strategies.

Based upon these conclusions, Harrison and Bramson then used Buchler's (1961) and Churchman's (1968, 1971) works for identifying five specific approaches in the way an individual perceives, makes meaning, and communicates. This research resulted in the five dimensions of thinking. The five dimensions of thinking identified by Harrison and Bramson's InQ are: (a) synthesist, (b) idealist, (c) pragmatist, (d) analyst, and (e) realist. The following brief explanation of these thinking style dimensions is included for additional definitional clarification:

Synthesist Thinking: A dimension of thinking associated with concentrating on underlying assumptions and abstract ideas. The orientation of synthesist thinkers is focused on integration while their behavior is often viewed as challenging.

Idealist Thinking: A dimension of thinking associated with focusing on process, aspirations, and values. The orientation of idealist thinkers is focused on assimilation while their behavior is often viewed as receptive.

Pragmatist Thinking: A dimension of thinking associated with examining problems within their situational context. The orientation of pragmatist thinkers is focused on payoff while their behavior is often viewed as adaptive and incremental.

Analyst Thinking: A dimension of thinking associated with abstracting facts into theories and problem-solving approaches. The orientation is focused on method while behavior is often viewed as prescriptive and logical.

Realist Thinking: A dimension of thinking associated with emphasizing available resources and

apprehendable facts. The orientation of realist thinkers is focused on the task at hand while their behavior is often viewed as empirical and objective.

Flat Thinking: A dimension of thinking associated with a natural predisposition towards using all five of the thinking styles with equal effectiveness depending upon the situation. The orientation of flat thinkers is focused on using the most effective thinking style for the situation while their behavior is often viewed as inconsistent.

Building upon the basic concepts of the five dimensions of thinking, Table 1, table 2, and table 3 provide additional information concerning the characteristics of each style. These tables also provide information concerning the strengths and liabilities for each of the five primary thinking styles.

Table 1: Summary of Thinking Style Orientations					
Orientations	Synthesist	Idealist	Pragmatist	Analyst	Realist
Characteristics	Integrative view.	Holistic view.	Eclectic view.	Deductive view.	Empirical view.
	Seeks conflict and synthesis.	Seeks ideal solutions.	Seeks shortest route to payoff.	Seeks "one" best way.	Seeks solutions that meet current needs.
	Interested in change.	Interested in values.	Interested in innovation.	Interested in scientific solutions	Interested in concrete results.
	Speculative.	Receptive	Adaptive	Prescriptive	Corrective
Strengths	Focuses on underlying assumptions.	Focuses on process and relationships.	Focuses on payoffs.	Focuses on method and plan.	Focuses on facts and results.
	Points out abstract conceptual aspects.	Points out values and aspirations.	Points out tactics and strategies.	Points out data and details.	Points out realities and resources.
	Good at preventing over-agreement.	Good at articulating goals.	Good at identifying impacts.	Good at model building and planning.	Good at simplifying, "cutting-through"
	Best in controversial situations.	Best in value-laden situations.	Best in complex situations.	Best in structured situations.	Best in well-defined situations.
	Provides debate and creativity.	Provides broad view, goals, and standards.	Provides experimentation and innovation.	Provides stability and structure.	Provides drive and momentum.
Liabilities	May screen out agreement.	May screen out "hard data."	May screen out long-range aspects.	May screen out values.	May screen out disagreement.
	May seek conflict unnecessarily.	May delay from too many choices.	May rush too quickly to payoff.	May over-plan, over-analyze.	May rush to over-simplified solutions.
	May try too hard for change, newness.	May try too hard for "perfect" solutions.	May try too hard for expediency	May try too hard for predictability.	May try too hard for consensus.
	May theorize excessively.	May overlook details.	May rely too much on what "sells."	May be inflexible, overly cautious.	May over-emphasize perceived "facts".
	Can appear uncommitted.	Can appear overly sentimental.	Can appear over-compromising.	Can appear "tunnel visioned."	Can appear too results-oriented.

Source: Harrison, A.F. and Bramson, R. M. 1988. *InQ inquiry mode questionnaire: A measure of how you think and make decisions.* Berkeley, Calif.: Bramson, Parlette, Harrison & Associates.

Part III: Conclusions of the Study

The third section of this paper addresses the conclusions of the study. Seven conclusions were highlighted in the full study, with three having special merit for this paper and presentation. These three conclusions are: (a) the tremendous potential for librarians participating in this study to develop the flexible, and highly effective, flat thinking style; (b) the effect of highly structured, or differentiated organizations, upon individual thinking styles; and (c) the lack of previous research connecting thinking style with the library science profession.

The first conclusion, the natural potential for librarians to develop a flat thinking style, is based upon a thorough analysis of the actual scores for each participant concerning the scores for each of the five thinking style dimensions. To understand this conclusion, a brief explanation concerning InQ scoring is provided.

Table 4 provides an illustrated summary of the strength of thinking style preferences based upon InQ scoring. Scores between 90 and 72 in any one style of thinking indicate a very strong preference for that style, with scores between 71 and 66 interpreted as a strong preference, and scores between 65 and 60 revealing a moderate preference for a specific thinking style. A score of 48 or less in any one style of thinking is considered a disregard for a thinking style, with scores between 48 and 43 considered moderate disregard, and scores between 42 and 35 considered strong disregard for a specific thinking style. Scores of 34 or below are considered a virtual neglect of a specific thinking style. A score between 59 and 49 notes a neutral preference for a specific thinking style. Differences between any two scores that are less than four points apart are considered too small to indicate a preferred thinking style (Harrison and Bramson, 1982).

A relatively low preference or disregard for any specific thinking style, coupled by an overall evenness among the scores for the five specific thinking styles, indicates a natural tendency toward the flat thinking style. The inclination towards a flat thinking style is viewed as an

Table 2: Quick Behavioral Clues to Help Recognize Thinking Styles	
Thinking Style	Behavioral Clues
Synthesist	bounces from topic to topic in a conversation asks "what if" questions argues theoretical points and talks a lot speculates about new ideas and concepts
Idealist	is a good and interested listener talks about long range goals, values and ideals wants to please you so you won't be upset often sounds disappointed in others
Pragmatist	Interested in a quick payoff quick-witted and quick on their feet playful and cheerful interested in a short time frame
Analyst	insists on technical data generally appears neat and orderly asks detailed and concrete questions is reluctant to change from the tried-and-true
Realist	is direct and frank seems impatient and restless and interrupts a lot says ... If you look at the facts ... Do we really need it? states opinions as if they were facts is quick to provide solutions to issues

Source: InQ Educational Materials, Inc. (1994). *Workbook for recognizing and influencing others' thinking styles.* Berkeley: Holland Parlette Associates.

Behavioral Clues	Synthesist	Idealist	Pragmatist	Analyst	Realist
Table 3: Thinking Style Behavioral Clues					
Apt to appear	Challenging, skeptical, amused.	Attentive, receptive, supportive.	Open, sociable, humorous.	Cool, studious, hard to read.	Direct, forceful, quick, non-verbal expression.
Apt to say	On the other hand... No, not necessarily...	It seems to me... Don't you think...	I'll buy that... That's one sure way...	Logically... It stands to reason...	It's obvious to me... Everybody knows that...
Apt to express	Concepts, opposite points of view.	Feelings, Ideas about values. What's good.	Non-complex ideas, Personal anecdotes.	General rules, supporting data.	Opinions, factual anecdotes.
Tone	May sound argumentative, sardonic.	May sound tentative, hopeful, and resentful.	May sound insincere, enthusiastic.	May sound stubborn, careful, dry.	May sound dogmatic, forthright, and positive.
Enjoys	Intellectual, philosophical arguments.	Feeling-level, discussions.	Brainstorming, Lively give-and-take.	Rational examination of issues.	Short, direct, factual discussions.
Apt to use	Parenthetical expressions, qualifying phrases, adjectives.	Indirect questions, Aids to agreement.	Case examples, illustrations, and popular opinions.	Long, discursive, well-formulated sentences.	Direct, pithy, descriptive statements.
Dislikes	Talk that seems too simplistic, superficial, mundane.	Talk that seems too factual, conflictive, dehumanizing.	Talk that seems too dry, dull, humorless, "nit-picking."	Talk that seems too irrational, aimless, "far-out."	Talk that seems too sentimental, impractical.
Under stess	Pokes fun.	Looks hurt.	Looks bored.	Withdraws. agitated.	Becomes

Source: InQ Educational Materials, Inc. 1994. *Workbook for modifying your thinking profile.* Berkeley, Calif.: Holland Parlette Associates.

asset since these thinkers are considered more flexible, creative, and better adapted to use the best thinking style to resolve problems based upon the situation (Svendsen & Svendsen, 1995).

Prior to the ANOVA calculations, the raw scores from the InQ instruments indicated that 57.6% of the sample had a moderate to neutral preference for the most preferred thinking style. After calculating the 20 mean scores necessary for the ANOVA analysis, a neutral preference for 16 thinking styles (80%) was noted. These scores reveal a natural tendency towards a flat thinking style.

The second conclusion highlighted for this paper involves the influence of organizational differentiation upon an individual's thinking style preference. According to the theory of differentiation, when organizations grow in size their environments become more complex. In an attempt to manage the organization, sub-units, such as library public service and technical service departments, are created. In time, these organizational sub-units become more differentiated from other sub-units in order to address specific work routines. Conformity in these sub-units becomes the desired norm, with individual members quickly realizing the need to behave, and think, like the rest of their unit, or like their immediate supervisor, in order to be considered effective, successful, and part of the group.

Table 4: Summary of InQ Thinking Style Preferences						
90–72	71–66	65–60	59–49	48–43	42–35	34–18
Very strong preference	Strong preference	Moderate preference	Neutral preference	Moderate disregard	Strong disregard	Virtual neglect

Source: Harrison, A. F., and R. M. Bramson. 1977. *InQ administration and interpretation manual.* Berkeley, Calif.: Bramson, Parlette, Harrison and Associates.

According to research conducted by Frankie (1980) and Lowry (1988), libraries are highly differentiated organizations. Data analysis for this study revealed that 84.4% of the organizational dyads (administrative peers working in the same library organization) had significant differences in thinking style preferences. In accordance with differentiation theory, it can be reasoned that in some library organizations, differences in thinking style preferences among administrative peers can affect the preferred thinking style among sub-unit members due to the desire to adopt the preferred thinking style of the immediate supervisor. Additional research is needed to verify and substantiate this conclusion.

The final conclusion highlighted for this paper involves the lack of previous research concerning thinking style research and the library science profession. Although librarianship is a profession that requires specialized cognitive and higher level mental organizational skills, very little research has been conducted concerning thinking styles and librarianship, with no previous studies found using the InQ instrument with library science professionals (Golian, 1998). However, the literature review conducted for the dissertation study revealed numerous research studies analyzing library professionals using other self-discovery instruments such as the Myers-Briggs Type Indicator or Kolb's Learning Style Instrument.

This lack of research concerning thinking styles and the library science profession severely limits the practical application and incorporation of thinking style research within the library science profession. Librarians must first become aware of thinking style research before they can attempt to understand, and finally, incorporate these concepts into every day library administration situations. As additional research is conducted and shared in the professional library science literature, more librarians and library administrators should begin to employ thinking style research for both personal and organizational growth.

Part IV: Practical Applications

The final section of this paper presents suggestions and advice on how librarians can become more creative and flexible thinkers.

The literature review, findings, and conclusions of this research study indicate that incorporating thinking style research can help facilitate understanding among co-workers and can help improve organizational communication. This is possible since thinking style research can be linked with opportunities for personal growth and with opportunities for organizational growth.

For personal growth, research shows that thinking styles can be modified when change and growth are considered important for professional growth (Harrison & Bramson, 1982). Research shows that individuals who strive to utilize the thinking style most appropriate for the situation (flat thinkers) have greater flexibility and creativity and are more effective problem-solvers (Harrison and Bramson, 1977; Svendsen and Svendsen, 1995).

Benfari (1991, 1995) created a four-step plan to modify skills for effective professional growth. In his plan, Benfari recommends taking the time to understand yourself, your co-workers, and your organization's culture. Only when understanding is achieved can modification begin. Using the information available in table 1, table 2, and table 3, Benfari's four steps, modified to include thinking styles, include:

Reflect: Take the time to understand yourself and others in terms of strengths and weaknesses concerning thinking style preferences.

Identify: Find work situations in which you have been effective and those in which you have been ineffective.

Determine: Recognize what aspects of your thinking styles play a role in both the positive and negative outcomes in these situations.

Modify: Work to achieve positive outcomes at all times by using the thinking style most appropriate for the situation, and try to align these outcomes with the mission of the organization.

For organizational growth, research shows that when thinking style awareness is used with daily work rou-

tines, improved work effectiveness for individuals and the organization can occur (Robinson, 1995; Sheldon, 1991). By encouraging workers to learn and reflect upon how thinking styles are viewed by others in the organization, library administrators help support team-based management and total quality management in their organizations. Table 5 provides additional information concerning how organizations can utilize thinking style research to enhance organizational growth.

Summary and Comments

Inter (1993) indicated that the relationship between library public service and technical service departments is strained by many variables including diversities in management orientations, differences in public service philosophies, and varying approaches towards descriptive cataloging. In 1966, Xu concluded that the administrative area of responsibility (public or technical service) and the level of responsibility had a direct relationship to communication behaviors of individuals within a library. The conclusions of this study indicate that thinking style research can help lessen these strained relationships by encouraging a more effective means of understanding and communication.

The literature review associated with this study reveals that librarians and library organizations have been using self-discovery tools as an effective means for developing effective library organizations (Golian, 1998; Scherdin, 1994). For example Kolb's Learning Styles Inventory and the MBTI personality style indicator are two very popular self-discovery tools that have been used in numerous library research studies. Although these instruments provide critical information to the success of

building effective library organizations, in recent years they have provided very little new information and knowledge for the library science profession. It is therefore suggested that library leaders and library administrators consider alternative methods and self-discovery tools for developing more effective communication patterns and staff development. One tool that can help in acquiring this new perspective and knowledge is the InQ.

The contributed paper that will be presented at the ACRL 9th National Conference will incorporate a PowerPoint display of the most significant facts from this paper. To help increase awareness of this powerful self-discovery tool, the first 90 people attending the presentation will be given a free copy of a simplified version of the InQ for their own self-discovery.

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Table 5. Applications For Using Thinking Style Research in Organizations

1. To broaden and deepen individual competencies in thinking, problem solving, and influencing others.
2. To support team building since the process has been proven to be a non-threating way of indentifying collaborative resources.
3. To coach others by helping them to strengthen under-used strategies and modify styles that are over used.
4. As an aid in the selection of key personnel, especially for providing strengths that are needed for enabling teams and the organization to work more effectively.
5. In integrating new employees into the organization by using the selection-process data to plan how best to orient and supervise new staff.
6. In matching persons to projects so that thinking styles and experiences can be applied to tasks appropriately.

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In addition to these resources, the copyright holders of the InQ instrument and cited workbooks can be contacted at the following address and phone number:

Holland Parlette Associates, Inc.
P O Box 10213, North Berkeley Station
Berkeley, California 94709-5213
1-800-338-2462

* This article includes a simplified version of the InQ copyrighted instrument.

** These items are highly recommended readings.