Measuring theory through practice: Librarians' perceptions of relevance, concreteness, and importance

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Abstract

Introduction. This study investigates how reference librarians perceive the relevance, concreteness, and importance of established theories of information behaviour. While the theory–practice gap has been widely discussed, little empirical evidence exists on how practitioners perceive formal theories in relation to their work.

Method. We conducted an online survey using plain language descriptions of twelve major theories of information behaviour. Participants rated each theory on three semantic differential scales: irrelevant-relevant to their work, abstract-concrete, and unimportant-important.

Analysis. A total of 771 valid questionnaires were analysed using descriptive statistics, correlations, and Wilcoxon signed-rank tests, and were compared with findings from a prior qualitative interview and card-sorting study.

Results. Reference librarians evaluated all theories as at least moderately relevant, concrete, and important. Despite strong correlations between relevance and importance ratings, interesting differences emerged: some theories were viewed as more relevant than important, while others were seen as more important than relevant to their work. This suggests that librarians differentiate between immediate applicability and broader conceptual value.

Conclusion. The study showed that reference librarians make subtle but meaningful distinctions in how they perceive information behaviour theories. A survey using semantic differential scales proved useful in capturing these perceptions and revealed patterns that align with qualitative findings.

Introduction

Our study investigated librarians' perceptions of information behaviour theories, models, and concepts (hereafter referred to as *'theories'*) in the context of their reference work. Although information behaviour is not the only theoretical foundation for reference work, it provides a crucial framing through which librarians interpret user behaviour and thinking.

Debates on the disconnect between theory and practice can be found across many fields (Matusiak et al., 2024) and library and information science is no exception (e.g. Abbas et al., 2016; Bawden, 2008; Haddow and Klobas, 2004; Nguyen and Hider, 2018). In our previous work (Van Scoy et al., 2024), however, we argued that the infamous gap between practitioners and scholars may not be as wide or insurmountable as sometimes assumed and that theories of information behaviour do make their way into practice and serve as a useful framework for librarians in their work.

We first investigated this problem through an interview study (Van Scoy et al., 2024) with a small number of public librarians and found that all of the information behaviour theories we tested were relevant to the practice of at least some of the participants. In that study, some participants raised concerns about the difference between theories that were relevant to their practice versus those that were important: they would note that a particular theory is not relevant to their reference service but acknowledged its potential importance in other settings. Another common assumption is that theory is abstract and too remote from practice, but our interview study showed that librarians were able to connect these theories to their reference work. The analysis presented in this paper further explores librarians' perception of theory through a survey of librarians engaged in reference work.

Background

While the theory-practice gap has been discussed in library and information science, empirical research directly examining how practitioners perceive or evaluate the relevance and usefulness of formal theories in the context of their work is scarce. To our knowledge, only a few such examples exist in information science. Wakeling et al. (2019) conducted in-depth interviews to examine practitioners' use or non-use of theory in relation to open access, while Schroeder and Hollister (2014) used a survey among American librarians to explore their familiarity with and use of critical theory. The lack of such empirical studies, and the challenges of investigating how relevant theories are to practice, have also been noted in other professional fields. For instance, Yanchar et al. (2010) investigated how instructional designers perceive and use theoretical concepts through a series of three semi-structured interviews with each participant. To ground the discussions, they incorporated artifacts such as online course syllabi as prompts. Their study showed that theories were often perceived as overly abstract, rigid, or complex, and that practitioners' perceptions of a theory's relevance were strongly shaped by its perceived practicality. In the field of marketing, Lowe et al. (2016) employed a Delphi method to assess whether social practice theories were seen as useful by experienced marketing managers. This study similarly concluded that the presented theories were often viewed as too abstract, complex, and impractical to support managers in their day-to-day work.

These examples suggest that there are several different aspects that can shape how practitioners view theory in connection to their work. This resonates with our earlier interview study, where participants' comments indicated that relevance alone might not fully capture how librarians perceive theory in practice. These insights informed our decision to extend the evaluation beyond perceived relevance and to include two additional aspects: perceived abstractness (or concreteness) of the theory and perceived importance. In broader discussions of the theory–practice gap, relevance and importance are often framed as closely related but not fully overlapping concepts. Relevance is typically associated with the perceived applicability or usefulness of theories in practitioners' immediate work contexts, whereas importance more often

refs to a broader assessment of a theory's value, contribution, or potential impact beyond direct day-to-day use (e.g., Miner, 2003; Tucker, 2012).

To examine this systematically and at scale, we developed an online survey in which participants evaluated information behaviour theories along three aspects. This paper examines the general patterns identified in the results and addresses the following research questions: *How do reference librarians evaluate information behaviour theories in terms of relevance, concreteness, and perceived importance? What patterns emerge across librarians' evaluations of relevance, concreteness, and perceived importance?*

Method

The online survey was developed based on plain language descriptions of twelve theories, originally created for a card sort exercise in an interview study. The English descriptions of theories, the rationale for selecting these twelve theories, and the process of developing the plain language descriptions are reported in Van Scoy et al. (2024).

The survey was distributed to librarians in Slovenia and the United States through social media, professional listservs, and the researchers' personal networks. In Slovenia, the survey was administered in Slovenian, and in the United States in English. Data from the two countries were collected separately but later merged for analysis in SPSS. To enable compatibility, the surveys were carefully designed to be identical in structure. For the purposes of this paper, the analyses are based on the combined dataset. The survey was conducted between April and June 2025. After data cleaning, the total number of valid responses was 771 (234 from Slovenia and 537 from the United States).

Three screening questions were included at the beginning to ensure participants met the study criteria: working as a librarian with at least some reference service responsibilities and having an MLIS or equivalent education. These criteria matched those used in the interviews, with the only difference that the survey sample included librarians from all types of libraries.

The twelve theory descriptions did not include the names of the theories or the authors, so participants had to base their judgement on the descriptions. For each theory, they were asked to provide ratings on three semantic differential scales: irrelevant to my work – very relevant to my work, abstract – concrete, and unimportant – important (Figure 1). All scales were coded from 1 to 5, with higher values indicating greater relevance, concreteness, and importance. Semantic differential scales (first introduced by Osgood et al., 1957) were chosen because they are a well-established method for capturing perceptions across contrasting attributes. The method has been shown to be intuitive and useful in various fields, and prior studies have suggested that it is suitable for assessing perceptions across different cultural contexts (Takahashi et al., 2016).
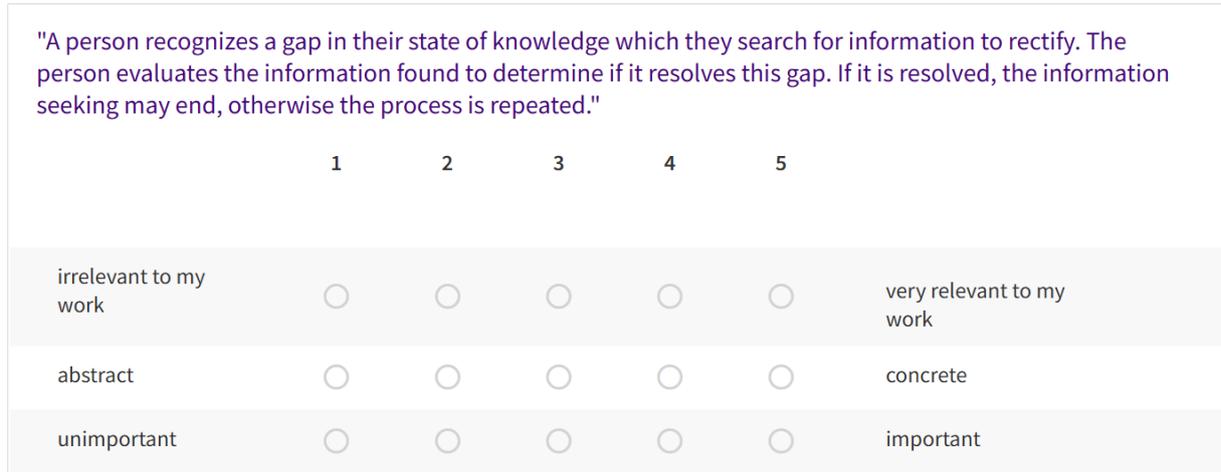
> "A person recognizes a gap in their state of knowledge which they search for information to rectify. The person evaluates the information found to determine if it resolves this gap. If it is resolved, the information seeking may end, otherwise the process is repeated."

	1	2	3	4	5	
irrelevant to my work	○	○	○	○	○	very relevant to my work
abstract	○	○	○	○	○	concrete
unimportant	○	○	○	○	○	important

Figure 1. Example of a plain language theory description with semantic differential scales used in the survey. Numbers are included for illustrative purposes only and were not displayed to participants.

Results

Figure 2 shows mean ratings for each theory based on relevance to librarians' work, concreteness, and importance. Mean values vary moderately across theories, ranging from 3.2 to 4.5 on the five-point scale, indicating that librarians generally perceive all theories as at least somewhat relevant, concrete, and important. The flags indicate the highest and the lowest mean scores within each aspect. Interestingly, one theory received the highest scores across all three aspects, while another theory received the lowest scores on all three. This illustrates a general alignment of the three aspects, which was observed also with other theories. Figure 3 further illustrates this pattern with three examples: the highest-ranked, the lowest-ranked, and a mid-ranked theory. In all three cases, the profiles of mean scores show a very similar shape, forming an almost perfect triangle. The only aspect that slightly deviates is concreteness, which tends to be rated somewhat lower than relevance and importance. Figure 4 extends this observation to all twelve theories, showing that relevance and importance consistently align and are rated higher, while concreteness is systematically lower in all theories except one (*Gross' imposed query*).

Theory	N	Mean scores		
		Relevance	Concreteness	Importance
Gratification theory (Chatman, 1991)	771	3.82	3.60	3.91
Bounded rationality - "satisficing" (Simon, 1955)	756	4.22	3.99	4.13
Information seeking model (Ellis, 1989)	746	⚑ 4.48	⚑ 4.16	⚑ 4.44
Anomalous state of knowledge (Belkin, 1982)	726	4.05	3.52	4.02
Model of information seeking (Wilson, 1999)	712	3.79	3.20	3.78
Everyday life info. seeking (Savolainen, 1995)	703	⚑ 3.36	⚑ 2.99	⚑ 3.49
Information poverty (Chatman, 1996)	699	3.59	3.46	3.89
Imposed query (Gross, 1995)	699	3.46	3.60	3.65
Berrypicking (Bates, 1989)	695	4.11	3.70	4.04
Information need (Taylor, 1968)	695	4.15	3.46	4.03
Sense-making (Dervin, 1992)	691	3.59	3.15	3.65
Information search process (Kuhlthau, 1991)	690	3.83	3.40	3.84

Note: Flags indicate highest and lowest scores.

Figure 2. Mean scores for relevance, concreteness, and importance of the evaluated theories. Flags indicate highest and lowest scores.
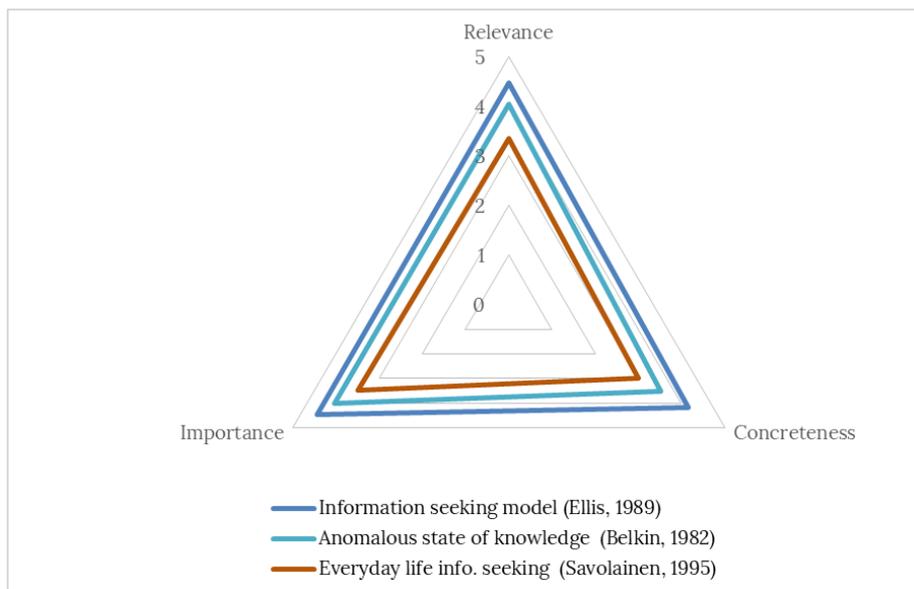

Figure 3. Profiles of selected theories (highest, lowest, and mid-level relevance) across the three aspects.
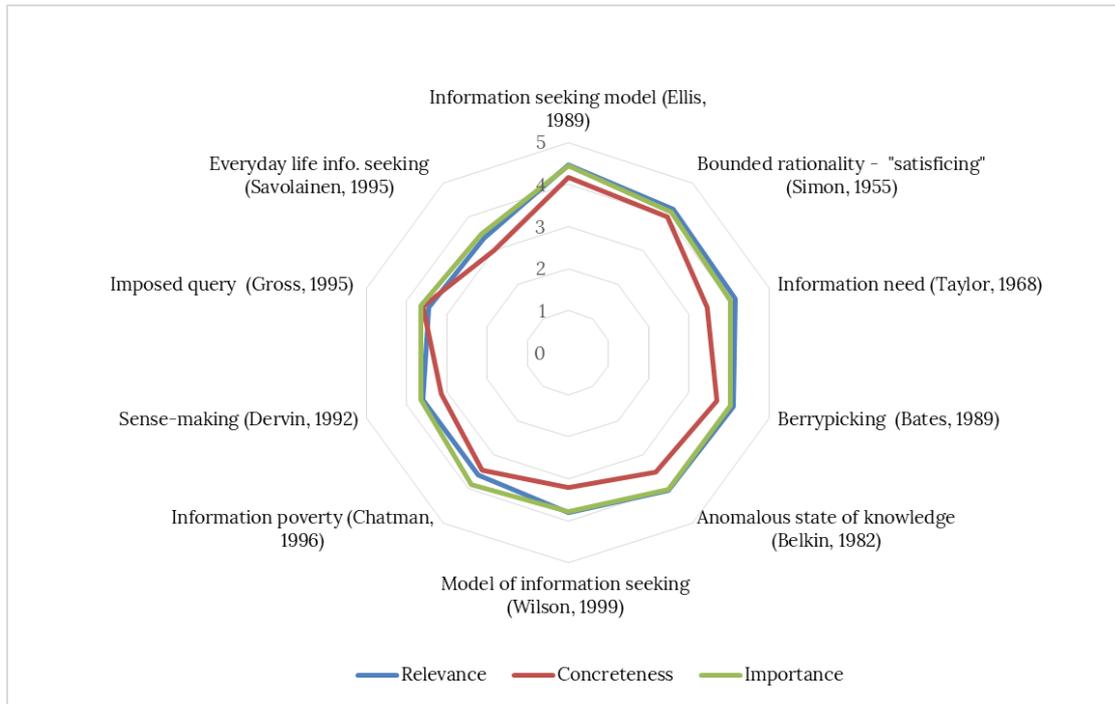
Figure 4. Radar chart of mean scores for all twelve theories across the three aspects.

To assess the extent to which the three aspects align across theories, we calculated Spearman correlations between relevance, concreteness, and importance (Figure 5). Correlations were consistently high. Relevance and importance showed the strongest correlation in all cases (from 0.72 to 0.82), while relevance and concreteness had the weakest (from 0.52 to 0.66). This confirms the observations in the mean scores, where relevance and importance largely overlapped, while concreteness showed a slight deviation.
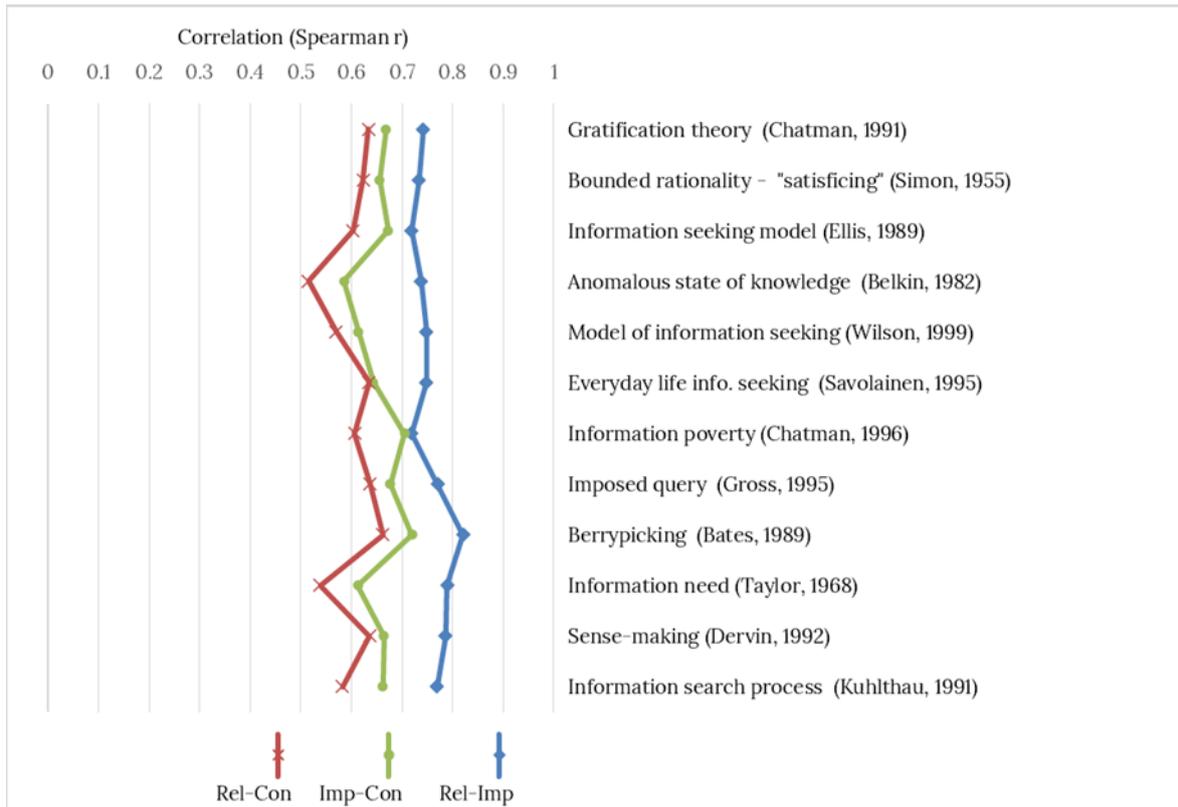
Figure 5. Spearman correlations between the three aspects (relevance-concreteness, importance-concreteness, relevance-importance) across the twelve theories.

To further examine the relationship between relevance and importance, we used the Wilcoxon signed-rank test for two related samples to compare rank distribution of scores for each theory. Unlike mean scores, which can obscure differences, this test shows how often a theory was rated higher on importance versus relevance. As shown in Figure 6, seven theories were more often rated higher on relevance than on importance, while five were more often rated higher on importance than on relevance. This suggests that, despite the overall similarity of mean scores, librarians did to some extent differentiate between the two aspects. The Wilcoxton signed-ranked test confirmed statistically significant differences for all but three theories. Effect sizes further highlight that the differences were more pronounced with certain theories. Medium size effects were observed for *Simon's bounded rationality, Gross' imposed query,* and *Taylor's information need.* The largest difference appeared for *Chatman's Information poverty,* where importance ratings were significantly higher than relevance ratings (Wilcoxon signed-rank test, Z = −5.47, p < .001). This suggests that librarians may view the concept as highly important for understanding users and reference work in general, even if they do not perceive it as directly relevant to their own day-to-day practice.

		Effect size		Rank distribution (Wilcoxon)			Direction
	r		Magnitude	Rel > Imp	Imp > Rel	N (non-ties)	
*Gratification theory (Chatman, 1991)	● 0.20		small	97	132	229	Imp > Rel
*Bounded rationality – "satisficing" (Simon, 1955)	● 0.30		medium	136	66	202	Rel > Imp
*Information seeking model (Ellis, 1989)	● 0.16		small	100	61	161	Rel > Imp
Anomalous state of knowledge (Belkin, 1982)	○ 0.08		very small	117	90	207	Rel > Imp
Model of information seeking (Wilson, 1999)	○ 0.03		very small	118	97	215	Rel > Imp
*Everyday life info. seeking (Savolainen, 1995)	● 0.26		small	102	148	250	Imp > Rel
*Information poverty (Chatman, 1996)	● 0.59		large	52	169	221	Imp > Rel
*Imposed query (Gross, 1995)	● 0.35		medium	78	160	238	Imp > Rel
*Berrypicking (Bates, 1989)	● 0.28		small	108	56	164	Rel > Imp
*Information need (Taylor, 1968)	● 0.36		medium	121	55	176	Rel > Imp
*Sense-making (Dervin, 1992)	● 0.16		small	90	109	199	Imp > Rel
Information search process (Kuhlthau, 1991)	○ 0.00		none	107	99	206	Rel > Imp

Note: *statistically significant difference between relevance and importance (Wilcoxon Signed Ranks Test, p < .05); r = Z / √N (non-ties)

Figure 6. Effect sizes (r) for Wilcoxon signed-ranked test comparing relevance and importance across the twelve theories.

Discussion

At first glance, the mean scores on relevance, concreteness, and importance were closely aligned, raising a question of whether participants viewed them as distinct aspects at all. While the correlations showed a strong link between relevance and importance, suggesting that participants often saw theories relevant to their work as well as important, the Wilcoxon test revealed differences in paired scores, indicating that librarians did not always treat the two aspects as identical.

The most pronounced case, both in terms of correlation patterns and effect size, was *Chatman's theory of information poverty*, which showed the lowest correlation between relevance and importance. The analysis showed that librarians considered this theory more important than relevant to their work. This finding resonates with those of the interview study, where several public librarians (especially from Slovenia) noted that, although they are aware of this theory and recognize its importance in certain contexts, it is not something they typically encounter in their reference work. A similar pattern was observed with *Gross's imposed query*, where participants also assigned higher importance than relevance. This may suggest that librarians acknowledged the significance of such situations even if it is not something they perceive as central to their own practice. In contrast, some theories showed the opposite pattern. *Simon's bounded rationality* and *Taylor's information need* were rated as more relevant to their work than important. Interestingly, this aligns with findings from the interview study, where these two theories were most frequently selected as relevant during the card sorting task. Taken together, these results suggest that the theories librarians perceived as most relevant for everyday reference practice were rated higher in relevance than in conceptual importance. This suggests that they perceived these theories as useful tools rather than significant theoretical frameworks. The consistency between survey and interview findings, and the fact that the most notable differences between relevance and importance occurred precisely in the theories that also stood out in the interview study, indicate that librarians did, at least to some degree, differentiate between the two aspects.

Compared to relevance and importance, the ratings for concreteness showed greater variation across theories. Correlations with the other two aspects were weaker, suggesting that participants interpreted concreteness as more distinct: a theory that was seen as more abstract was not necessarily judged as less relevant. This finding is not entirely consistent with studies discussed in the background section, where abstractness and complexity resulted in practitioners' lower perception of theory's usefulness and relevance. One possible explanation is that participants were

given plain language descriptions designed to summarise the main idea of each theory in only a few easy-to-understand sentences.

Some theories were perceived as more concrete, such as *Ellis' model of information seeking*, perhaps because it outlines clear stages of information behaviour. In contrast, *Savolainen's everyday information seeking* and *Dervin's sense-making* were likely considered more abstract because they emphasize individuals' internal processes and contexts. It is difficult to determine whether participants' ratings reflected the theory itself or the wording of our descriptions. For example, *Savolainen's everyday information seeking* was particularly challenging to translate into plain language, and the resulting description remained more theoretical and less directly related to libraries and resources than many of the other theories. On the other hand, the highest ranked theory, *Ellis' model of information seeking* is very clear and can easily be applied to a library setting, where librarians can see their own role in the process. This interpretation is consistent with the rationales of interviewed librarians (paper forthcoming), who often conceptualised information behaviour specifically in relation to their own role in the reference interaction.

The consistency of results with the qualitative approach in our prior study demonstrates that a larger scale survey using semantic differential scales has potential for capturing practitioners' perceptions of theory and for revealing patterns in how theory is viewed. The analysis showed that, overall, practitioners did distinguish among the three tested aspects, particularly in the most pronounced cases. Future analysis could explore whether these perceptions differ according to librarians' experience with reference work, the type of library in which they are employed, or even across national contexts.

Nevertheless, several limitations of this study must be acknowledged. Plain language descriptions may have influenced how librarians perceived the theories, and the three scales did not necessarily capture the richness of how they think about theory. Participants also received little guidance on the meaning of each aspect, which could have led to varied interpretations. The findings should therefore be interpreted with some caution, while also pointing to valuable directions for future research.

Conclusion

The study shows that reference librarians make subtle distinctions in how they perceive theory, adding nuance to the theory-practice debate. It also demonstrates the potential of semantic differential scales for capturing practitioners' views and complementing qualitative approaches. Drawing on a larger sample of librarians and extending earlier qualitative work, the study provides a foundation for future research on practitioners' perceptions and use of theory. Beyond research, the findings also have implications for teaching, suggesting that information behaviour theories can be introduced from two perspectives: as practical tools and as conceptual frameworks.

Acknowledgements

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