

Understanding Japanese EFL student writers' beliefs about justification and sourcing

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Abstract

Little is known about Japanese EFL undergraduates' beliefs regarding sourcing and justification when writing advanced academic papers, such as a graduation thesis, or *sotsuron*. A phenomenological psychological study was conducted to qualitatively investigate belief structures of advanced EFL student writers at a Japanese national university. Three major themes emerged: uncritical reliability, uncritical authority and audience. These point to a naïve belief structure which corresponds closely to characterisations of dogmatist thinkers in Western studies. This structure is modelled inside a critical realist paradigm. A suspicious interpretation reveals a lack of criticality in approach amongst participants, who regard a named Authority as a gatekeeper. The result is that participants trust Authority to act as a gatekeeper which operates as a proxy for engaging in critical reasoning. Recommendations for EFL writing educators are given.

卒業論文などの高度な学術論文を作成する際の根拠づけと、論理的整合化に関する日本のEFL学生の意識についてはほとんど知られていない。日本の国立大学の上級EFL学生の意識構造を質的観点から調査するため、現象学的心理学的研究が行われ、3つの主要なテーマが浮上した。すなわち、無批判な信頼性、無批判な権威者、および読み手である。これらは、西洋の研究における独断的思想家の特徴に顕著に匹敵する浅薄な意識構造を指し示すもので、批判的実在論的パラダイム内で形成されたものであるが、(批判的精神に基づく)懐疑的解釈の手法を用いることで、著名な権威者をいわば「番人」とみなしてしまう参加者たちにはアプローチ上の批判的精神は欠如し、結果、彼らはその権威者を自分たちに代わって批判的思考を行う、いわば「代理人」として機能してくれることを託してしまっているということが明らかになる。EFLライティング担当教員に向けた推奨事項を述べたい。

Introduction

Compare the following three excerpts. The first is by Skinner (1950) whose behaviourist psychology encouraged generations to ignore internal cognition:

There seems to be no a priori reason why a complete account of the higher mental processes is not possible without appeal to theoretical processes in other dimensional systems. (p. 215)

Rallying against this, Chomsky (1959) strongly urged for a directed attention inside the black box, heralding the advent of cognitive psychology:

It is not primarily the fact that he[Skinner] has set functional analysis as his problem, or that he limits himself to study of observables. What is so surprising is the particular limitations he has imposed on the way in which the observables of behaviour are to be studied. (p. 3)

More recently, Chemero (2009) attempts to overthrow the dominance of the Chomskian modal approach, arguing for a multilevel division of mental causality instead:

This is exactly what philosophers of mind need in order to show that mental causation is possible. That is, it is a high-level (i.e., cognitive) entity that acts causally on the lower-level (i.e., physical) phenomena that make it up. Of course, this solution to the problem of mental causation is only available to those who explain cognition dynamically (p. 200)

These excerpts point to a very human involvement in the development of our understanding. The Hegelian dialectic is clear; Skinner's thesis is rebutted by Chomsky, and the question regarding human cognition undergoes an expanded debate in Chemero. Undoubtedly, this cycle will continue with further advances as the Hegelian spiral grows to reflect our deepening understanding. What constitutes knowledge is far from being fixed; indeed, even a cursory investigation such as the one above reveals the nature of knowledge as an ever-changing fluid entity, shaped by human understanding and to be further shaped, refined, rejected and replaced by future understandings.

Educators of EFL writing are aware of the importance of knowledge fluidity (Emaliana & Latief, 2017; Smiley, 2018). The development of sophisticated belief structures in students is widely regarded as a key goal in education (Bråten, 2016; Elby et al., 2016; Iordanou et al., 2016). However, a substantial gap is observed between student writers and professional academic writers. Since Perry and his colleagues' (1970; Perry et al., 1968) seminal research, the field of epistemic cognition has produced a wealth of data regarding human intellectual development in college. Three levels of knowers are often differentiated: absolutist (or naïve), multiplist and evaluator (or sophisticated) knowers (Kuhn et al., 2000). Naïve thinkers typically do not view knowledge as fluid (Hofer, 2016). Instead they view knowledge as being fixed and often reflection of the world as being "that's the way it is" (Greene, Azevedo, & Torney-Purta, 2008, p. 153).

The naïve worldview is coherent. The strength of its internal logic presents difficulties for educators who may wish to provide product models of education without essentially addressing the vital process issues that are necessary for student development from a naïve to a more educationally availing worldview. Hofer and Pintrich (1997) summarised the coherence of the naïve perspective. The main characteristic is an underdeveloped perspective of knowledge. Such believers hold the view that knowledge is certain and unchangeable. Knowledge comes from Authority, and because Authority has access to

knowledge, it is unquestionably correct. The learner's role is to accept that knowledge because if it were not correct, Authority would not teach it. Accordingly, there is no need to provide evidence to support knowledge nor to attempt to justify it. These views support the belief that it is unthinkable to question knowledge, or to see it as the product of debate (Hofer & Pintrich, 1997).

At the other end, the sophisticated knower is defined by Bråten, Ferguson, & Strømso (2013) as being someone who sees "knowledge as tentative rather than certain, complex rather than simple, originating in expert authors rather than the reader, and justified by rules of inquiry and cross-checking of knowledge sources rather than own opinion and experience" (p. 881). Bråten and his colleagues' (2013) generate this definition from multiple source document reading models (Britt & Aglinskis, 2002). This point is important because this line of inquiry does not consider philosophical notions of source justification, such as justification by coherence, correspondence, or consensus (Dew & Foreman, 2014; Goldman, 1999). A truly sophisticated thinker is able to locate truth claims within the context and the method of their generation.

The logic of the naïve thinker's position has been portrayed in detail because of its relevance to the situation regarding the Japanese university EFL writer. Epistemic cognition, per se, is an underdeveloped field in Japan, especially in the English literature, where only one peer-reviewed empirical study exists to my knowledge. Using her quantitative measuring instrument, Hofer (2010) compared Japanese first-year undergraduate psychology students with their counterparts in the United States and found a naïve tendency among the Japanese students. In the related field of critical thinking development, however, much is known about Japanese undergraduate thinkers' difficulties in dealing with more sophisticated writing and argumentation (Armand, 2016; Dunn, 2014, 2016; Mulvey, 2016). The consensus view is that Japanese undergraduates may be characterised towards the naïve end of the continuum.

Yet, neither quantitative instrumentation nor attempts to introduce critical thinking actually reveal the beliefs of Japanese undergraduate students. Questions remain concerning these belief structures. For example, is Hofer and Pintrich's (1997) characterisation of students in the United States context appropriate in the Japanese context? Following from this, if differences do exist, are pedagogic methods that are developed in non-Japanese contexts appropriate for Japanese students? Indeed, what are the developmental trajectories of Japanese thinkers, and how can educators better provide pedagogies to support that development? The first step is to find out those beliefs.

Sourcing and justification

This present study aimed to investigate Japanese undergraduates' beliefs about sourcing and justification. To operationalise this, Hofer and Pintrich's (1997) multidimensional model is presented, which consists of epistemic cognition in two overarching categories: the nature of knowledge and the nature of knowing. The nature of knowledge is divided into the dimensions of fixed-to-fluid knowledge and simple-to-connected knowledge items; and the

nature of knowing contains issues about sourcing and justification. Table 1 summarises Hofer and Pintrich's (1997) model. Although since Schommer (1990), each dimension is considered to be orthogonal, significant conceptual overlaps are evident between the dimensions. The characterisation of the naïve knower presented earlier is strongly suggestive of a stage-like developmental categorisation rather than of separate dimensional threads.

Table 1.

Hofer and Pintrich's (1997) Dimensional Model of Epistemic Cognition

Category	Dimension	Description
Nature of knowledge	Fixed-to-fluid knowledge	[Fixed: naïve beliefs] Once a fact has been established, it is true for all time. [Fluid: sophisticated beliefs] Knowledge is in a perpetual state of revision.
	Simple-to-connected knowledge	[Simple: naïve beliefs] Knowledge items are separate from and should be learned independently from other items. [Connected: sophisticated beliefs] Knowledge comprises interrelated systems of elements that can be understood only in relation to each other.
Nature of knowing	Source of knowledge	[Externalist: naïve beliefs] Knowledge originates from Authority and is objective. Subjective thoughts are only one's opinion. [Internalist: sophisticated beliefs] There is a recognition of the self in the active construction of one's knowledge, which turns out to be formed by complex interaction with external knowledge sources and internal belief systems.
	Justification of knowledge claims	1. [Dualist: naïve beliefs] Knowledge is justified by either calls to Authority or by personal experience. [Evaluatist: sophisticated beliefs] Knowledge justification entails appropriate methods of evaluating technical information from expert sources within the present contextualised discussion. 2. [Call to Authority: naïve beliefs] Authority is correct; this is all the justification required. [Positional awareness: sophisticated beliefs] Truth claims can be justified in relation to their dependence on coherence to a theoretical system, correspondence to other related claims, models and phenomena and by consensus within an immanent belief system established by experts or by logic.

In terms of sourcing and justification in naïve knowers, again, a coherent set of beliefs may be distinguished. To such knowers, if Omniscient Authority (Schommer-Aikins, 2004) is the source of knowledge, there is no requirement to justify knowledge. The corollary of this is that if the source of knowledge is our own experience, again no justification is necessary. Moreover, facts given by Authority are true and therefore unchanging. Again, a naïve corollary presents itself; if facts are true, there is no need to consider the source of these facts because sources are merely restatements of discoveries. Notice that this naïve belief structure foregoes any engagement with the history of knowledge claims, with any critical attitude towards knowledge and with any of the deeper issues that exemplify knowledge creation.

This form of belief structure is long established in studies in Western contexts (Baxter Magolda, 1992; Belenky et al., 1986; P. M. King & Kitchener, 1994; Perry, 1970) and in other non-Western settings worldwide (Buehl, 2008; Hofer, 2008; Khine, 2008). To date, the Japanese voice is largely missing because studies in the Japanese context either assume the

validity of the Western model by utilising quantitative instrumentation derived in Western settings (Hofer, 2010; Smiley & Masui, 2016) or are in Japanese, which limits the communication of the findings to the world stage (Hirayama & Kusumi, 2010; Nomura & Maruno, 2011, 2012, 2014, 2017; Tasaki et al., 2008). The outcome is that Western educators in Japan who do not have access to Japanese language publications may not be aware of Japanese undergraduates' beliefs about sourcing and justification, or if differences exist between those structures found in Western contexts and in Japan. These beliefs are likely to become highly relevant during academic writing, critical thinking and debate activities.

Method

Research question

This study aimed to investigate the belief structure of Japanese undergraduate students. To elicit beliefs without imposing an external belief structure on participants, a qualitative research model was utilised. The research question was *How do Japanese undergraduate student EFL writers understand sourcing and justification?*

Participants

Participants were volunteers from a 3rd-year English writing class that prepares students for writing their graduation thesis, a *sotsuron*, in English the following year. Their thesis is a 5,000-word academic document. The participants were all English majors at a faculty of humanities in a national university whose English levels were upper-intermediate to advanced (roughly Eiken Grade Pre 1 to Grade 1). The project was a part of my doctoral research and was cleared with the university's institutional review board and, in lieu of my employer university not having an institutional review board, with consultation and approval of the Faculty Dean. Nine participants volunteered and all gave informed consent. All participants' names have been anonymised according to Saunders, Kitinger and Kitinger's (2015) criteria and selected based on the most popular baby names in Japan in 2000 (Heisei Namae Jiten, 2019). No data from students in the class group who had elected not to participate in this study is included in this analysis.

Data collection

An online private and secure discussion board was created using the Blackboard learning management system. A data collection question, *When you read or hear new information, how do you judge the reliability of the source?*, was presented to participants on Day One, to which participants were required to submit an initial response by Day Three and at least two follow-up responses to fellow students/participants by Day Seven, at which point, the discussion was terminated. A follow-up response was defined as a post no less than 70 words in length that directly addressed some aspect of the question or responses of other students. No phatic communication (that is, *I agree with you* or *Hi there, friend*) was counted as a response. Students received points for their activity which contributed towards their final class grade.

Analytical method

Before analysing the data, an *a priori* template of potential themes was generated from the literature on epistemic cognition (Hofer & Pintrich, 1997), epistemic doubt resolution (Bendixen & Rule, 2004), justification models (Bråten et al., 2013) and multiple document reading (Britt & Aglinskas, 2002). The full *a priori* template themes and their definitions are in the Appendix.

The analysis was conducted using template analysis (N. King, 2012), a phenomenologically-driven technique that allows pre-arranged themes to investigate a dataset within a targeted research focus. Themes are initial lenses but should be abandoned if other themes become apparent (ibid.). A key assumption in descriptive phenomenology is that participants' words are treated as being real descriptions of their beliefs (Langdridge, 2007) as they have lived and understood their experiences (van Manen, 1990). Participants' writing is then analysed for psychological meanings related to the thematic focus (Langdridge, 2007). This results in a descriptive phenomenological psychological account which is then interpreted *suspiciously* (Willig, 2013) against the sophisticated model of epistemic cognition in order to assess participants' belief structures using a benchmark model.

So far, this method resembles an interpretative phenomenological analysis (IPA). However, this paper utilises a critical realist methodology (Bhaskar, 2008; Collier, 1994; Sayer, 1998) that aims to uncover fundamental ontologies in order to describe properties, mechanisms and emerging properties and actions caused by the belief structures (O'Mahoney & Vincent, 2014). These structures are conceptually concordant with the descriptive phenomenological method recommended by Giorgi (2012; 2017) and Spinelli (2005) which is based on Husserl's belief in *invariant structures* or essences of a phenomenon. Critical realism allows an epistemology that accepts the realist nature of our world (Moses & Knutsen, 2012) while agreeing that the social world is constructed (Berger & Luckmann, 1967) in an ontology that rejects postmodernist and relativist accounts of phenomenology (that is, IPA).

Results

Table 2 summarises the overall findings.

Table 2

Summary of main findings

Category	Result
text	around 2200 words generated
theme use	many of the a priori themes not used
coding	fifty unique codes representing aspects of belief structures
emergent themes	three major thematic areas observed: <ol style="list-style-type: none"> 1. the use of the gatekeeper as a proxy for reliability (uncritical reliability) 2. absolute trust in names (uncritical authority) 3. the writer's target audience influences the student reader's trust (audience)

Findings

Descriptive phenomenology: The student voice

Uncritical reliability

The first theme, *uncritical reliability*, centres on the notion of the gatekeeper. A printed academic book carries the most weight. Misaki gives her reasons;

I think that the most reliable statement is book, because it is carefully examined by many people like author, editor and publisher.[Misaki] (Note that participant language has not been altered.)

The action of examining statements is performed by individuals who are legitimately authorised. They conduct their examination 'carefully', which further legitimises the validity of the text. Misaki's trust in published works resides on her belief that these actions are carried out diligently by approved people. She adds some further criteria;

And recently released book having new information is better than old one. It is because that new book will be sophisticated by referring to previous several book, theses and researchs.[Misaki]

A book being recent augments the sense of plausibility in Misaki because the 'careful' actions taken to produce an earlier single work are compounded in later books that draw upon them. Sophistication is a function of reinforcement of factual integrity by referencing preceding works. This belief that later works are more reliable is echoed by Sakura;

I judge the reliability of the source by date when the source was published and how many times it was quoted or used as reference.[Sakura]

Sakura goes one step further than others and checks if a source is used in other works. In these extracts, the notion of the gatekeeper is clear. The logic underpinning their use is coherent; only true and reliable information is present in refereed books, so using them will make students' own writing true and reliable. Sakura's addition of checking citation numbers connects to the second theme: uncritical authority.

Uncritical authority

Conceptually related to the gatekeeper is the belief in the security of placing trust in authorities. Aoi states this directly;

If the information is said by a person whose position in that academic opinion is obviously high, or it is very persuasive, you believe the information regardless.[Aoi]

Belief is a result of the source, and Aoi's statement indicates her unmediated trust in a position, similar to Misaki's faith in the "author, editor and publisher". Taiki takes this point up and notes that;

Authors must have responsibilities to their books so it is reliable and not easy to publish books unlike an anonym on the Internet.[Taiki]

The connection between authority and responsibility is strong. Individuals who have gained a position of authority are required to exercise their responsibility, unlike Internet sources, which are seen by Taiki and other participants to be published anonymously.

Informational content needs to be justified in some form, but because this is not apparent on the Internet, participants do not place their trust in them, and therefore, they do not use them in academic writing assignments. Shota qualifies this point;

However, I don't say I can trust them easily. Not all information on the web has justification.[Shota]

In the context of the online discussion, Shota is referring to an official title, such as a publisher's name, being present as a form of justification. Misaki narrows her scope for trust down to a particular name;

Besides, famous specialist's opinion tends to be right and trustworthy. Usually famous specialist's theory is widely accepted as valid, for example, Generative grammar in field of language acquisition such as Chomsky.[Misaki]

Taiki adds to the notion that names are important;

looking at author's history and achievement is a way to assess the source is trustworthy or not.[Taiki]

Kenta encapsulate this point succinctly;

Reliable means a thing is socially high position.[Kenta, emphasis in original]

In summary, participants' ability to trust informational content centres on the physical publication of an academic book by a reputed publisher and gains even more credibility if the author is famous. But this picture contains a nuance voiced by some participants concerning the intended audience of published works.

Audience

Sakura and Aoi discussed another aspect of trust in sources, but as the others did not become involved, it is not clear if these views are shared by all participants.

If the source is aiming at just general (random?) people who do not have knowledge about the topic, it is not really credible, but if it's for scholars or experts, it can be more reliable.[Aoi]

To both Sakura and Aoi, even an academic topic may not be reliable if the intended readership is not for other academics;

[books written] for experts is more reliable than for general people is also persuasive. Some source like books for general people will be good introduction to the area. however, to make the idea or theory clear and easy to understand or to attract readers, authors omit details or emphasize some points too much. Ergo, the source is not reliable. [Sakura]

General introductory texts may be biased towards introducing the main ideas or be attractive instead of disinterestedly presenting only the true aspects of the topic. So, Sakura places her trust in works whose primary audience is academic readers.

Belief structure

Taking a critical realist interpretation, the data reveal underlying structures, their properties, how the interaction of structures instigate mechanisms, which in turn lead to emerging actions. These are illustrated in Figure 1.

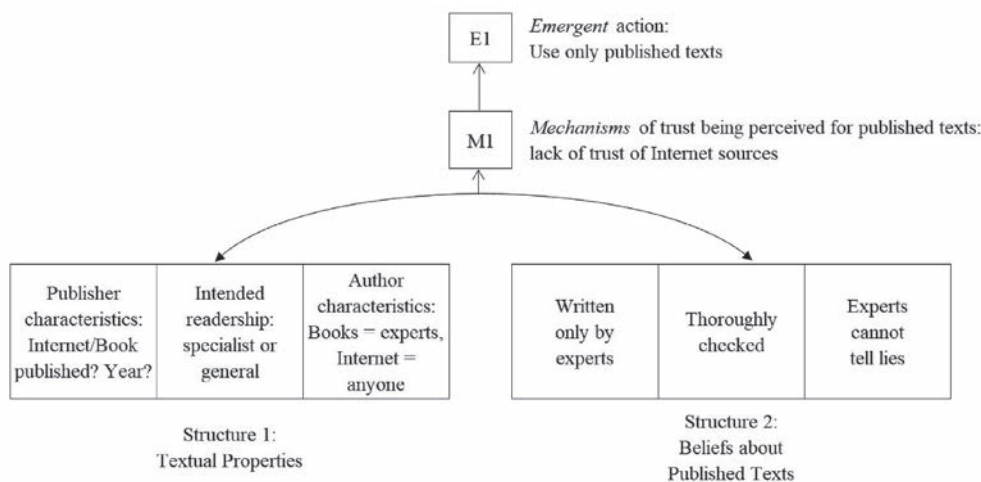


Figure 1. Structures, mechanisms and emergent actions in sourcing

The textual properties of publisher characteristics, intended readership and author characteristics interrelate with belief structures concerning published texts. Mechanisms are “entities ... that make a difference in their own right” (O’Mahoney & Vincent, 2014, p. 6) and are either activated, lie dormant, or are impeded by other mechanisms and structures. In this case, the mechanism of trust is activated by the belief structures about published texts but is impeded in relation to all Internet sources. The emergent outcome is the use of published texts in academic writing.

Suspicious interpretation

The three emergent themes reveal a coherent belief structure that is naïve and with important correspondences with characterisations found in Western sources. Greene, Azevedo and Torney-Purta (2008) provide a typical account of naïve thinkers in the American context. Their three types, the *absolutist*, the *dogmatist* and the *sceptic*, differ in the following ways. The absolutist believes that knowledge is a direct capture of reality; while both dogmatists and sceptics recognise the role of human nature in the construction of knowledge. Dogmatists trust Authority implicitly, but sceptics do not accept the possibility of knowledge or truth. Against this characterisation, the present participants can be considered dogmatists. Furthermore and in accordance with dogmatist perspectives, justification and sourcing issues merge into one single act of calling to authority as is evident in Shota’s claim that “not all information on the web has justification”.

One important difference between Hofer and Pintrich (1997) and the present study is how the notion of Authority is conceived. To Hofer and Pintrich, Authority may be omniscient, unknown and residing in institutions. In this dataset, the feature of a *name* must be added to Authority: the name of a publisher, editor, or author. Authorities have a social duty, and this responsibility must reside in a person.

The primary suspicious finding in this study is that participants’ engagement with critical

reasoning is non-existent. The gatekeeper blocks wrong information, meaning that students do not need to. It becomes a proxy for academic reasoning. This particular participant group may be assessed as being at the *uncritical use of acceptable sources* stage, the third level of five illustrated in Figure 2.

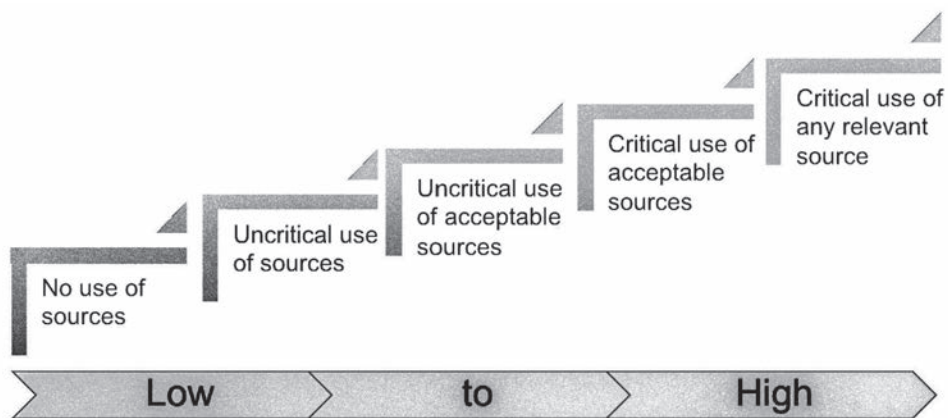


Figure 2. Developmental levels in sourcing

In summary, the participants' sourcing and justification beliefs:

- are towards the naïve end of the continuum
- rely exclusively on the notion of the gatekeeper as a proxy for critical thinking
- believe that authority figures have a social responsibility to tell the truth
- do not demonstrate an advanced understanding of critical reasoning
- use justification/sourcing coherently but uncritically
- The notion of authority is too strong. A famous name or published text is sufficient grounds for being believed by students. Criticality is entirely missing.

Recommendations

This paper finishes with some recommendations for teachers of academic writing, especially at the graduation thesis, *sotsuron*, level. Students' developmental needs include a focus on:

- contextualising how we understand sources
- knowing how to relate an external source to a student's present argument
- personalising any abstract academic argument to show the human thinking that underlay the book, or paper, that students read

It is this final point with which I wish to conclude. The key idea centres on the need to create educational environments in which doubt is encouraged and purposely explored. This stands in direct contrast with much education where information is transmitted to learners as a final, unquestionable product made by distant researchers (Willingham, 2009). The

argument runs like this: if students are exposed only to final products, it is unlikely that they will see how knowledge is developed. They will remain passive receivers of information, and attempts to introduce them to more constructivist methods of knowing will fly over their heads or be dismissed. And when the time comes for those students to write their own thesis, their own belief structure is likely to block their progress.

Chomsky, for example, began his quest to describe the Language Acquisition Device because of the historical dominance of behaviourism. Chomsky's argument is rooted in the attempt to overturn what he saw as bad reasoning. Modern cognitive psychology is now seriously questioning Chomsky's approach and its misguided use of the computer metaphor of the human mind. Academic thinking and academic argumentation are not primarily the accumulation of information; they are the result of not knowing and of questioning.

A major way for us to develop academic thinking in our students is to demonstrate where the academic questions came from and how they were generated. We need to present to students, not the products of academic research, but the processes of research. We need to help students see how academics were motivated to find better knowledge and to help students see the as-yet unanswered questions.

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Appendix

A priori themes for template analysis

Themes	Definition	Source
certain knowledge fixed	To which degree is knowledge certain or in doubt?	Hofer &
knowledge source of knowledge	To which degree is knowledge fixed or fluid?	Pintrich
justification of knowledge	Where is the source of knowledge, inside or outside? How is knowledge justified?	(1997)
epistemic doubt volition resolution strategy	How do people experience doubt concerning a truth claim? (How/) Do people want to change their beliefs? How do people resolve epistemic doubt?	Bendixen & Rule (2004)
justification by authority	Relying on authority sources (e.g. textbooks, famous names, teachers) without critical analysis of content.	Bråten,
justification by multiple sources	Comparing how different sources treat the same topic.	Ferguson,
justification by personal experience	Believing claims because they match the person's experience.	& Strømso (2013)
source evaluation	Where does the source come from? Who authored the source?	Britt & Aglinskas (2002)
source corroboration	Finding and resolving differences between two or more sources.	
source contextualisation	Understanding how a text has a historical and localised context.	
plausibility	Does the truth claim feel possible?	Smiley (2018)