Reverse Engineer Your Literature: Applying the Pitch Template to Help Understand Academic Literature

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Abstract
Academic literature can be wordy and hard to understand. This letter discusses the application of the "pitching research" template by Faff (2015) as a useful tool to help PhD students in understanding the literature they read for their research. The authors also offer personal reflections on the experience of using the pitch template for this purpose and encourage other PhD students to use it to aid their research.
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1. Introduction

> "The noblest pleasure is the joy of understanding."
> Leonardo da Vinci

This letter examines an extension of the use of the pitch template to aid PhD students and new researchers in reviewing the literature used in their study. The author started his PhD at the University of Queensland in 2016 and took RBUS6914 as a preparatory course for his research. One module in that course highlights how the pitch template can be used by researchers to reverse engineer a scholarly article. The purpose of this practice is to help students in understanding better, what information is the paper trying to convey.

The pitch template was originally proposed by Faff (2015) to help PhD students in succinctly communicate the essential elements of their research proposal to an academic expert. Given that context, the reverse would also be true, that the template can also be used by PhD student to extract essential information from texts written by academic experts. The idea is that the same things that need to be communicated succinctly in a proposal are more or less similar to the things that need to be extracted from an academic article. So, the pitch template can be used to aid PhD students in identifying key information of a scholarly article.

In the course of their study, a PhD student will most likely need to extract information from a lot of scholarly literature. So, the ability to read and process academic texts is a pre-requisite for the successful completion of a PhD. Unfortunately, not all students are fully equipped with the necessary tools to perform sufficiently rigorous literature reviews. Alpert & Kamins (2004) raised this issue when they highlight the importance of preparatory coursework for PhD students in Australia. Furthermore, this issue is also especially true for non-native speaker PhD students (Braine, 2002). Jumping straight to independent research without a basic foundation of academic literacy skills will usually lead to lower quality of research and less actual works being published. In addition, a significant amount of time within a PhD study should have been allocated for reading the relevant literature. Therefore, the potential use of the pitching template as an initial framework to process academic literature should be examined to improve the quality of literature review by PhD students.

The structure of this letter is as follows: The first section introduces the motivation and idea behind the paper. The second section describes the step by step process of how to reverse engineer an academic paper using the pitch template. The third section elaborates the personal reflection of the first author in using the process to perform the literature review. The last section concludes the examination of how the pitch template can be used as a tool for PhD students to aid literature review.

2. Step by Step Process

As in the original research pitch template (Faff, 2015), there are eleven points in the reverse engineer template. Researchers do not have to finish the process of identifying these points in a linear fashion. However, for the ease of explaining the process, they are described in this letter linearly. The author provides an illustration of its application in Table 1. The example given here is a conceptual paper published in the European Journal of Marketing about the classification of customer co-production activities in manufacturing.

The first point in a reverse engineer pitch is the Working Title. Different from the usual template, the working title of this pitch should be the full citation reference of the reverse engineered paper. In the example, instead of writing only the title of the article, the author put the full APA citation as the working title. This way, the reverse engineer pitch can be easily referred later during the actual writing of the literature review.

The second point is the Basic Research Question. Identifying this item is the key information of any academic literature. Our understanding of a literature would be incomplete without a clear identification of what is the research question being asked. Usually, this element can be found in the abstract or introduction.

The third point is the Key Papers. Identifying key papers is important in exploring other literature relevant to the paper being reviewed. Usually, key papers are mentioned early in the introduction section and repeatedly throughout the article. Key papers should be state of the art, so most likely they are published less than five years from the date of publication of the paper being reviewed.

The fourth point is the Motivation/Puzzle. This part relates to the background of the research question and the overall purpose of the paper. Some papers cited real world phenomenon as their motivation while others referred to some gap in the theory. It is usually described in the introduction section and also referred again in the conclusion.

The fifth point is the Idea. This part focuses on the core "intellectual drive" of the paper. In a quantitative paper, this idea will appear in the literature review or the methodology section as research hypotheses. In a more qualitative paper, this idea will appear in the introduction section as the aim and objectives of the said paper.

The sixth point is the Data. This part highlights the data used in the study. As an exception, conceptual papers do not use any data. However, in most cases, research papers will describe in detail the type, size and source of the data in the methodology section.

The seventh point is the Tools. This part focuses on the analytical method used to generate the findings. For quantitative papers, this part will focus on the statistical analysis; while for qualitative papers, this part will describe the analytical framework. It is important to note that citing the software used in the study (i.e. SPSS) does not constitute identifying the analytical tool since most statistical software can aid in multiple analytical methods. This information is usually described in more detail in the method section.

The eighth point is the <u>What's New</u>. This part delineates the novelty of the paper being reviewed. The novelty of a paper should be on the idea of the study, but sometimes it is focused on the data or tools used in the research. Most likely, this part is identified clearly in the introduction and conclusion. If not, the reader also must carefully shift for it in the literature review or methodology section. Researchers can also present this novelty in a Mickey Mouse Venn diagram (see figure 1).

The ninth point is the <u>So What</u>. This part elaborates the impact and implication of the paper for stakeholders. A single study may have different impacts and implications for each identified stakeholders. In some cases, this part can be easily identified from the introduction and conclusion. However, more often, the paper did not identify this part explicitly. Therefore, the reader must construct possible impacts and implications as inferred from relevant information in the introduction, discussion and conclusion.

The tenth point is the <u>Contribution</u>. This part identifies the academic contribution of the paper. It answers specifically what is the research implication of the paper and what further questions that can be asked based on the findings of the study. Similar to the previous part on impact and implication, readers may have to construct their own understanding of the contribution of a paper. Sometimes, the actual contribution of a paper as perceived by the reader is different than what is mention in the introduction or conclusion section of the paper being reviewed.

The eleventh point is the <u>Other Consideration</u>. This final part focuses on any additional reflection on the paper. In the case of a reverse engineer template, this part identifies the key findings of the paper being reviewed. Key findings include support or refutation to existing theories and new insights on the phenomenon being explored. Most likely, readers can find this information described in the result and discussion section.

Table 1. An example of the completed 2-page pitch template of a key paper

Pitcher's Name	Imam Salehudin	Purpose	Reverse Engineer
(A) Working Title	Jiménez, F.R., E. Voss, K., & L. Frankwick, G. (2013). A classification schema of Co-production of goods: an open-systems perspective. *European Journal of Marketing*, 47(11/12), 1841-1858.		
(B) Basic Research Question	1. What defines a customer co-production in the manufacturing of goods? 2. What is the limit to its domain? 3. How do we categorise its activities?		
(C) Key paper(s)	1. Etgar, M. (2008), "A descriptive model of the consumer co-production process", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 97-108. 2. Lusch, R. F., Vargo, S. L., & O'Brien, M. (2007). Competing through service: Insights from service-dominant logic. *Journal of Retailing*, 83(1), 5-18. 3. Sheth, J. N., Sisodia, R. S., & Sharma, A. (2000). The antecedents and consequences of customer-centric marketing. *Journal of the Academy of Marketing Science*, 28(1), 55-66.		
(D) Motivation/ Puzzle	Customer co-production is the active involvement of customer in the generation process of the core offering itself. Research on customer co-production has been focused largely on the delivery of services. On the other hand, the application of co-production in the manufacturing of goods has been neglected in the academic literature. Existing definitions and classifications of customer co-production activities leant heavily in the context of services that their application in the context of goods has been less relevant.		

THREE	Three core aspects of any empirical research project i.e. the "IDioTs" guide
(E) Idea?	This paper aimed to fill the gap by defining and classifying the customer co-production activities in the manufacturing of goods. This paper used the general systems theory to create a taxonomy of customer co-production activities of goods. This paper identified no dependent or independent variable and tested no hypothesis.
(F) Data?	This is a conceptual paper. So no empirical data was used in this paper. However, the study used definitions and activities described in published academic literature to formulate the proposed classification schemata.
(G) Tools?	The study used the logical partitioning approach in developing the classification. Compared to the alternative, this approach produces taxonomies with better generalisation outside the data set. The paper used no statistical software or measurement items.
TWO	Two key questions
(H) What's New?	This paper is the first classification of co-production activities in the manufacturing industry. This classification reduced the overlap between constructs and domains of the co-production of goods. In effect, it increases the relevancy of applying customer co-production concept in the context of tangible products.
(I) So What?	Researchers interested in the co-production of goods can use this taxonomy to guide their theory development and empirical research design. This taxonomy also facilitates the communication and collaboration of research and practice in co-production of goods by reducing ambiguity and overlaps between concepts and domains of co-production in the context of tangible goods.
ONE	One bottom line
(J) Contribution?	Providing the foundation for future research on co-production of goods, by laying a formal definition and identifying key attributes of different co-production activities in the context of manufacturing.
(K) Other Considerations	Key findings: 1. Two criteria were identified as the key basis of classification (i.e. nature of input and customer autonomy). 2. Six sub-areas of co-production of goods were identified as the result of the classification (i.e. restricted co-manufacturing, unrestricted co-manufacturing, co-ideation, co-design, mass customization, and participation loop).

3. Personal Reflection of using the pitch to Reverse Engineer a Key Paper

Prior to my encounter with the pitch template, I usually read key scholarly articles "the old way" using printed material and the highlighter pen. I read one article and identified interesting titbits using a highlighter for future reference. Without a clear purpose or framework, this practice usually ends in large batches of the pages being highlighted. Sometimes, I wrote notations beside the highlighted part to write down why I consider that part important. This practice may be easier to do at first. However, by the time I need to write that literature review, a lot of my time was spent trying to figure out the pattern of those highlighted parts from the multiple papers I've read. Most of the time, I've already forgotten large parts of what have I read earlier and why I considered a particular part to be important.

The first time I applied the pitch template to reverse engineer a key paper for my thesis, it was not easy. It required multiple iteration and non-linear reading to comprehend the meanings and construct an understanding of the message. Some key parts are not mentioned explicitly in the paper. However, after I finished the reverse engineer, I felt that I have produced something tangible

from my reading time. I actually have something to show after I finished the journal article. When I used the "paper and highlighter" method, this is seldom the case.

Using the template also helped to structure my comprehension of the paper and made it easier to identify important parts of the paper. Meanwhile, I can also begin paraphrasing the key insights rather than simply copy-pasting it to the reverse engineer template. After reverse engineering the first paper, I found it easier to apply the framework to the second paper. It takes practice but the bottom line is that the reverse engineer template can really save me time spent to read the literature. Using the template as structure, I can quickly identify the core elements of the paper as shown in the Mickey Mouse novelty diagram (See Figure 1).
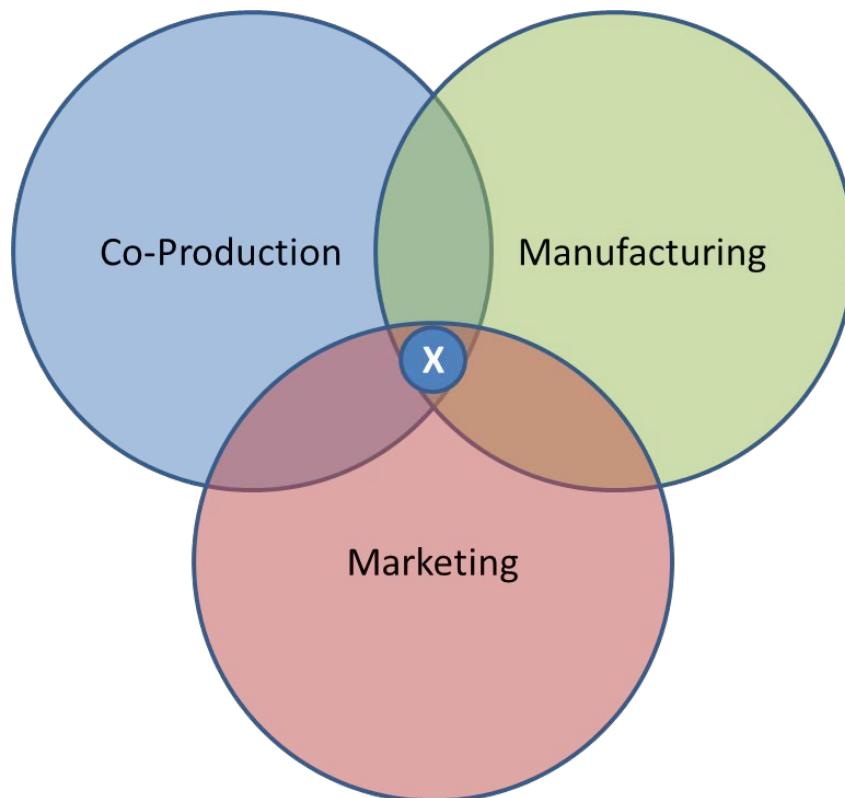

Figure 1. Novelty Diagram

My final key insight from my experience is to utilise the research pitch website (https://pitchmyresearch.com) when using the template. The website provides a free platform to work on and save the pitch template anytime and anywhere. Additionally, the pitches can also be made public and available to other users. In theory, this could facilitate discussion and collaboration between researchers. At least, browsing the public pitches provides various examples of research pitch applications. The reverse engineer pitch shown as an example in Table 1 is also accessible from the website.

4. Conclusion

This letter offers the application of the pitch template by Faff (2015) as a tool to aid in reviewing academic literature. In addition to a description of a step by step approach, the author also offers personal reflection in applying the template. I found that the template helps in structuring the information extraction process during the reading activity and improves the result.

Based on that experience, I encourage fellow PhD students to utilise the pitch template in reading and reviewing the literature. As the final recommendation, I also found the pitchmyresearch.com website really helped the process of applying the pitch template to reverse engineer academic papers.

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