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# A HERMENEUTICS INSPIRED 'LEARNING-BY-DOING' PEDAGOGICAL APPROACH FOR ACTION DESIGN RESEARCH

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## **Abstract**

*This paper presents a hermeneutical analysis of the confessional accounts of four doctoral candidates, following their completion of a research methodology module on Action Design Research (ADR). This hermeneutical analysis uses the seven concepts of hermeneutics (c.f. Myers, 2009) to unpack the lived experiences of the doctoral candidates throughout the 8-session 'learning-by-doing' approach to the module. Following our open, axial and selective coding, our analysis reveals that (i) neophyte researchers build confidence in a research methodology (ADR) through 'hearing each other' throughout an iterative learning-by-doing process, and (ii) having a tangible design artefact (e.g. checklist) makes it easier for neophyte researchers to share their, and evaluate others', interpretations of 'how-to' operationalise a research methodology (ADR). We conclude our analysis with a conceptualization of a hermeneutics inspired 'learning-by-doing' pedagogical approach, for ADR, presented as a learning flow.*

**Keywords:** Action Design Research, Hermeneutics, Neophyte Researcher, Pedagogy, IS Education

## **1.0 Introducing the Problem**

Over the past decade (within the Information Systems department where this research is conducted) there has been a growing number of what we refer to as *practitioner-researcher* (Nagle and Sammon, 2016, p.370) doctoral candidates. Typically, these doctoral candidates prefer an applied approach to research that affords them the opportunity to solve problems in tandem with doing the day job. Therefore, the Action Design Research (ADR) module is designed in such a way as to facilitate an active learning approach for doctoral candidates who identify as *practitioner-researchers*.

ADR is a problem-solving methodology that explicitly aims to design solutions as tangible design artefacts (e.g. models, frameworks, applications) that unpack/solve complex problems currently experienced by organisations (Sein et al, 2011). The methodology can be classed as a type of Design Science Research that starts explicitly with a real problem instance and later generalises its learnings into relevant theoretical contributions (Iivari 2015, Nagle et al 2022). The fact that ADR focuses on real problems experienced by an actual client/organisation provides a level of research relevance that is lacking in business schools (Shapiro and Kirkman, 2018). However, ADR is not without challenges. Firstly, generating theoretical contributions worthy of publishing in top journals is a risky endeavour, which is not helped by the unpredictability and longitudinal/iterative nature of developing a rigorous solution for an actual client. Secondly, just like other DSR methodologies, ADR suffers from methodological slurring. This entails a lack of methodological transparency, which limits the adoption of the methodology but also calls into question the process rigour of solution development. From a pedagogical perspective these challenges highlight the necessity to teach ADR in a fashion that exposes the doctoral candidates to the principles of implementing ADR, the limitations of published ADR studies, and the challenges of conducting ADR in a real-life scenario. As a result, we present the analysis of an 8-session ‘learning-by-doing’ approach designed to create a tempo that affords practitioner-researcher doctoral candidates the opportunity to experience ADR, particularly the twists and turns of designing, building, and evaluating an artefact as a solution to a real problem.

Initially, the ‘learning-by-doing’ designers envisioned the problem as being concerned with *“how a neophyte researcher should execute ADR effectively”*. It was expected that the learnings from doing three iterations of an artefact design, build, and evaluation would provide doctoral candidates with a greater sense of the mechanics and politics of ADR. These learnings would be especially valuable should the practitioner-researcher doctoral candidates actually undertake an ADR approach for their own PhD research project. Therefore, the ADR module design is influenced by the fact that practitioner-researchers have to find the right depth of analysis to figure out if an empirical ADR paper is a good ADR paper or not. However, this is not a trivial task, in terms of “how-to”. It can often be the case that neophyte researchers are reading exemplars of ADR execution and unfortunately not taking inspiration from

these same exemplars to inspire how they themselves should execute and present their own ADR studies. It is believed that the ‘learning-by-doing’ technique opens this “doing ADR” black box. As noted, the focus of this paper is on the analysis of the learning-by-doing approach. For further details on the pedagogical design of the approach please see (Nagle et al., 2023).

The remainder of this paper is structured as follows. Section 2 covers the research approach: confessional accounts workshop (as data gathering) and hermeneutics (as a mode of qualitative data analysis). Thereafter, Section 3 presents our findings and discussion. The paper conclusions and next steps are presented in Section 4.

## 2.0 Research Approach

This section presents our approach to data gathering and data analysis.

### 2.1 Confessional Accounts Workshop as Data Gathering

Utilised by Mathiassen and Sandberg (2013) to explore how to bridge the practice-research gap within IS, they noted that "*confessional accounts serve to demystify fieldwork by revealing how research is practiced*" (p. 478). In the case of this study, we acquired the confession accounts of four students during a 2-hour workshop with the aim of gaining a detailed and honest assessment of an 8-session ‘learning-by-doing’ ADR module designed by the authors. Furthermore, following the approach of Mathiassen and Sandberg (2013) the 2-hour workshop incorporated autonomous and communicative reflexivity to fully understand the experiences of those involved in the module. This allowed each workshop participant to develop and strengthen interpretations of their experiences through open discussion, requests for clarification, and challenges on verbalised interpretations. To initiate the discussion, the following prompts (see Table 1) were provided to the participants a week before the workshop.

1	The challenge of conducting ADR while still learning it.
2	The value of peer presentations and evaluation.
3	Appreciating your value as a "novice" ADR researcher.
4	Pitfalls you did and did not avoid.
5	The fit/relationship between you and the ADR method/project.
6	Parts of ADR you felt most difficult/easy.
7	Presentation of your work through presentations and the final submission.

**Table 1. Confessional Workshop Discussion Prompts.**

## 2.2 Hermeneutics as a Mode of Qualitative Data Analysis

Hermeneutics is best understood as a critical realism and personal involvement is essential to progress how we understand things. For the purposes of this research, we view hermeneutics as an activity that is often described as an “*approach to meaning making*” (Myers, 2004 p.104) and is “*primarily concerned with the meaning of a text or text-analogue*” (Myers, 2004 p.105). According to Myers (2004, 2009) there are seven concepts underpinning hermeneutics, as follows: *historicity, the hermeneutic circle, prejudice, autonomization, distanciation, appropriation, and engagement*. See Table 2 for a brief description of each of these concepts.

When treated as a specific “*mode of analysis*” (Myers, 2009, p.182), these hermeneutics concepts “*help qualitative researchers analyse their data*” and more specifically “*interpret and understand the meaning of a text or multiple texts*” (Myers, 2009, p.181). Furthermore, these concepts are very useful “*in situations where there are contradictory interpretations... of events*” (Myers, 2009, p.182). As part of our qualitative data analysis, we are trying to make sense of the “*seemingly contradictory*” (c.f. Myers, 2009, p.170) lived experience stories (text) that emerge during the 2-hour confessional. We take these differences in personal narrative as a sign of “*confused, incomplete, cloudy, and contradictory views*” (c.f. Myers, 2009, p.171) amongst the four practitioner-researcher doctoral candidates who completed the ADR module. Therefore, using hermeneutics aids our understanding of “*what people say and do, and why*” (Myers, 2009, p.182).

Concept	Significance
Historicity	<i>“The ontological claim that human beings are their history... our understanding of ourselves and others.... occurs in an historical context where our historically informed present informs our interpretation of any topic or subject. Understanding a phenomenon means being able to talk about it with others in a community” (p.184).</i>
The Hermeneutic Circle	<i>“The movement of understanding is constantly from the whole to the part and back to the whole. It is a circular relationship... [and] refers to the dialectic between the understanding of the text as a whole and the interpretation of its parts, in which descriptions are guided by anticipated explanations” (p.185). “The hermeneutic process should continue until the apparent absurdities, contradictions, and oppositions... no longer appear strange, but make sense... at least in the researchers mind” (p.186).</i>
Prejudice	<i>“The hermeneutic maxim is: ‘no knowledge without foreknowledge’... prior knowledge plays an important part in understanding. Our attempt to understand a text always involves some prior knowledge or expectation of what the text is about” (p.186). Therefore, “prior knowledge is a prerequisite for understanding, even though most of this knowledge might be tacit knowledge and taken for granted” (p.187). “The suspension of our prejudices is necessary if we are to begin to understand a text or text analogue... this does not mean that we simply set aside our prejudices. Rather, it means that we, as researchers, must become aware of our own historicity. We need to become aware of how our own views and biases are to a large extent determined by our own culture and personal history” (p.187).</i>
Autonomization	<i>“The author’s meaning, once it is inscribed in a text, takes on a life of its own... whenever speech is inscribed in a text: the text takes on a fixed, finite, and external representation. This means that the text now has an autonomous, ‘objective’ existence independent of the author... it is virtually impossible to take back [once published]” (p.188).</i>
Distanciation	<i>“Refers to the inevitable distance that occurs in time and space between the text and its original author on the one hand, and the readers of the text (the audience) on the other” (p.188). “A text is communication in and through distance... a text takes on a life of its own, it becomes dissociated from the original author, the originally intended audience, and even its original meaning... text is the medium through which we understand ourselves” (p.189).</i>
Appropriation	<i>“We only come to understand the meaning of a text if we appropriate the meaning of the text for ourselves, i.e. we make it our own. This act of appropriation is essential for understanding to take place” (p.189).</i>
Engagement	<i>“Meaning emerges from the engagement of the reader and the text. As a reader engages with the text, both the reader and text (or the meaning of the text) are changed. This process of critical engagement with the text is crucial” (p.189).</i>

**Table 2. The Underlying Concepts of Hermeneutics (source: Myers, 2009).**

The emphasis of qualitative data analysis is on sense making (c.f. Bhattacharjee et al., 2012) and coding is one of the techniques widely used in analyzing qualitative data in order to build theory (Buchwald et al., 2014, Tallon et al., 2013). Therefore, “*what*

*coding does, above all, is to allow the researcher to communicate and connect with the data to facilitate the comprehension of the emerging phenomena and to generate theory grounded in the data”* (Basit, 2003, p.152). In this analysis the lead author created an analytical text from the MS Teams transcript of the 2-hour confessional recording. However, the four doctoral candidates also created a verbal script of their respective “lived experiences” (on four occasions during “show & tell” sessions) throughout the 8-session ADR module. Therefore, the authors also had the ability to review the four doctoral candidates’ final assignment submissions as well as each author having witnessed (and provided feedback on) the four “show & tell” sessions in respective academic years (2020/2021 and 2021/2022). There is no doubt that both authors exemplify the “*double hermeneutic*” as we do not stand “*outside of the subject matter looking in*”, but we study the four doctoral candidates “*from the inside*” and “*already speak the same language as the people being studied*” (c.f. Myers, 2009, p.190).

For this research, the open, axial, and selective coding process took place over a 7-month period (from June 2022 to December 2022). This coding was conducted on three levels, as follows: (i) each individual doctoral candidate – their lived experiences (*micro*), (ii) within both academic years - two doctoral candidates per year (*meso*), and (iii) across all four doctoral candidates – as an ADR community (*macro*). During the coding process, the research team followed ‘*collaborative reflection*’, to offer a “*diversity of perspectives*” and challenge assumptions (c.f. Olmos-Vega et al., 2022, pp.5-6). Most importantly, ongoing discussions of coded outputs, by the authors, maintained the ongoing accuracy and consistency of our coding. Finally, our constant comparative analysis efforts culminated in the production of the module learning flow (akin to a process theory approximation). This module learning flow is presented later in the paper (see Figure 1).

In the next section we present the outcome of our analysis.

### **3.0 Findings & Discussion**

Based on our analysis we appreciate that the ADR module design does follow a *hermeneutics inspired learning-by-doing pedagogical approach*. Therefore, the

influence of, and interplay between, the seven underlying concepts of hermeneutics (*historicity, the hermeneutic circle, prejudice, autonomization, distanciation, appropriation, and engagement*) can be appreciated when reflecting on the lived experiences (or the text generated from reflections on these lived experiences) of the four doctoral candidates.

In an effort to present this *hermeneutics inspired learning-by-doing pedagogical approach* we visualised our understanding as a learning flow (see Figure 1). As highlighted in the learning flow visual, throughout the 8-sessions the doctoral candidate's *prejudice* shapes their interpretations less and less, whereas their ever-evolving *historicity* starts to have a bigger influence and part to play in their learning-by-doing. However, *appropriation, engagement* and *the hermeneutic circle* move somewhat in tandem over the 8-session period. In particular, the doctoral candidate's appreciation of the importance of movement between "texts" (e.g. the prescribed literature being reviewed, and the commentary of their peers during the "show & tell" sessions) increases, and their new and improved interpretations are perceived as being more accurate solutions to the problem (*how well documented is the execution of ADR in empirical studies?*). Finally, over time the *distanciation* between the doctoral candidate and their interpretations (influencing their design artefact) increases, and this affords the doctoral candidate the opportunity to critically evaluate their own interpretations as if they were the work of someone else. Furthermore, following the first "show & tell" session the sense of *autonomization* increases, and on submission of the final assignment, the level of *autonomization* between the doctoral candidate and their interpretations (design artefact) is at its greatest.

Based on our analysis we appreciate that four hermeneutics concepts (*engagement, appropriation, prejudice, and the hermeneutic circle*) are directly linked to the doctoral candidates' personal efforts at meaning making (their personal *inputs* to the learning-by-doing approach). Furthermore, the other three hermeneutics concepts (*historicity, distanciation, and autonomization*) are linked to the findings/results of the doctoral candidates' personal efforts (the *outputs* of the learning-by-doing approach and their willingness to share these outputs). We will now present our findings based on the three patterns that emerged as part of our open, axial, and selective coding (of the confessional accounts of the four doctoral candidates) using the seven hermeneutic



concepts (*historicity, the hermeneutic circle, prejudice, autonomization, distanciation, appropriation, and engagement*). These three patterns are: **seeking clarity**, **finding voice**, and **building confidence** (see Figure 2). Each of these patterns reflects the interrelationships between specific hermeneutic concepts, as follows:

- **seeking clarity:** (*engagement, appropriation, the hermeneutic circle*)
- **finding voice:** (*prejudice, historicity*)
- **building confidence:** (*distanciation, autonomization*)

These three patterns are now explored in the following sections.

### 3.1 Seeking Clarity

When asked to reflect on the leaning-by-doing approach, three of the doctoral candidates confessed it was “*hard*” and “*challenging*”, while one doctoral candidate (P1) suggested it was “*easy*” (see Table 3).

P1	P2	P3	P4
<i>easy enough – I took an engineering approach and flow charted the ADR steps</i>	<i>wasn't easy – I was bringing in other learning from other spaces (e.g. action learning and design thinking)</i>	<i>challenging to start – despite having a career in social research and research evaluation, and having done a DSR masters project</i>	<i>the challenge was parking the in-depth understanding I would normally do in terms of other methodologies (as a designer)</i>

**Table 3. The Participants' View of the Learning-By-Doing Pedagogical Approach.**

In fact, for P2, the leaning-by-doing approach was “*incredibly valuable*” and brought ADR to life: “*if I had just been reading and writing in a theoretical context, I don't think it would have come to life in the same way*”. This can be seen as a reflection of the level of investment (*engagement* with the texts) that P2 and others made. However, where P1 refers to the process as easy, it may be more a reflection of their linear (non-iterative) *engagement* with the ADR literature prescribed. This could be described as being more akin to a ‘tick-the-box’ exercise for P1 (who stated clearly, at the outset of the module, that they were not using ADR in their research). P1 comments “*the reason why I may be found it easy is that I found huge parallels between ADR and what I do every day in engineering. I just fell into the ADR methodology [reading Sein et al. (2011)] very easily and I said ‘yeah, this is it, I love it’. I flowcharted it, and I didn't go much beyond that. I didn't have time to expand into other areas but found Sein et al. (2011) to be very useful. I was able to use it*”. It

is fair to suggest (from analysing the confessional) that P1 relied more than others on their *prejudice* (engineering) right throughout the duration of the module, therefore, their *appropriation* (making their own of the text) is perhaps narrower than it might have been, given the “*plan the work, and work the plan*” engineering mantra referred to by P1, where “*you almost have to switch off that part of your brain when you’re questioning yourself*”.

P2 also captures an alternative perspective on *prejudice* very well by revealing “*so I had those methods and concepts [action learning and design thinking] in my head while I was getting into the ADR space. So, I found it hard because I was trying to learn the initial [ADR] concepts while also trying to minimise what was already in my frame of reference and not to contaminate (to try and give myself a space to understand ADR concepts), because as soon as I started reading Sein et al. (2011) and the idea of the problem space, I was in Design Thinking (comparing/contrasting, deconstructing/reconstructing)*”. So, it appears as if P2 was trying hard to silence her prior knowledge and not allow it to contaminate her understanding of ADR. However, P2 also reveals later in the confessional that there is a symbiotic relationship between *prejudice* and *appropriation*, where they suggest “*I was trying to avoid doing that [comparing to prior knowledge], but as I moved through the process [learning-by-doing], I realised that it was actually a useful reference point, to reflect back on what was being said in ADR. I could see how Design Thinking could inform the ADR process and enrich it, and equally what Design Thinking lacks, ADR has some aspects that could benefit the development of a scalable Design Thinking methodology*”.

When discussing their lived experiences, they related to each other using ‘*like [P2], I also...*’ and ‘*unlike what [P1] said, I...*’. In fact, towards the end of the 2-hour confessional you could see a natural clustering (across various aspects of their ADR experiences) where P1 & P4, and P2 & P3 shared similar views. It could be argued that P1 & P4 represented a more ‘*hard sciences*’ *prejudice* while P2 & P3 represented a more ‘*soft sciences*’ *prejudice*. For example, P3 provides a stark contrast to the lived experience of P1. For example, P3 (who is using ADR in their research), suggests that they “*spent way too much time reading the papers, but that ultimately paid off in the end*”. P3 uses idiomatic expressions and talks about “*going right down into the weeds*”, which they suggest, is “*my usual style*” and “*probably made a lot more work*”.

*for myself*". However, P3 suggests that it is this depth of iterative *engagement* that affords them the ability to "get a better understanding of the different stages of ADR that Sein et al. (2011) is calling out". P3 suggests that, like P2, independent of their prior knowledge (*prejudice*), "I still had to break it down and I had to set it in the context of research, evaluation, AR (action research) and DR (design research) to kind of locate ADR and its origins. I also went through the ADR paper (Sein et al., 2011) on several occasions but still couldn't get how that would be implemented in practice". Therefore, "unlike what P1 said about putting it into a flowchart, I was still trying to understand some of the concepts, for example, what's the class of problems you're working with?, what's the difference between the B and I in the BIE?, those kind of questions". This contrasting questioning style of P3, coupled with a deep *engagement* with the ADR papers (both the ADR methodology and ADR empirical papers), when compared to that of P1, introduces the constant movement of understanding (*the hermeneutic circle*) that is taking place.

P3 comments, given her challenges in understanding ADR through reading Sein et al. (2011) alone, "so I quickly jumped to Mullarkey and Hevner (2019) as a model that kind of unpacked that original BIE stage called out by Sein et al. (2011). I liked their breakdown of the of the 4 different cycles [diagnosis, design, implementation, and evolution] and within each of those then there were 5 activities [problem formulation/planning, artefact creation, evaluation, reflection, and learning], and you could have different artefacts. So, I found that specificity that Mullarkey and Hevner (2019) offered really helpful, and I used their matrix of the 4 stages and the 5 activities. So, I had a 5x4 matrix [design artefact] and that's what I used to evaluate the papers. So, I had to do all that before I came up with a checklist that might help other people in their efforts to appreciate how they might operationalise ADR". This shows an increased meaningfulness (*appropriation*) for P3 from continuous critical *engagement* with multiple texts and movement around these texts to generate new and improved interpretations (*the hermeneutic circle*). P3 also comments that "reading both [Sein et al. (2011) and Mullarkey and Hevner (2019)] allowed for great clarity. Seeing something in Mullarkey and Hevner (2019) and then going back into Sein et al. (2011) and seeing it there, having not seen it there initially". In fact, reflecting on P3's final assignment, the evolution of the design artefact (from iteration 1 to iteration 3) is visible, as is its reflection of an improving understanding of ADR, in tandem

with its increasing utility in assessing the operationalization of ADR in published empirical papers. Of course, this is the underlying ambition of the learning-by-doing approach, that with each iteration, the design artefact will reflect a participant's maturing understanding of ADR. This effort at meaning making appears to give P3 an edge, over the other doctoral candidates, in being able to call out the weaknesses in some of the empirical papers (in how ADR was operationalised). For example, P3 comments "*and still, at the end, I still think a lot of the ADR stages are implicit or combined together in the papers*". So, while P3 agrees with P1 regarding their love for the methodology, the challenge (their point of difference), according to P3, was more about using their artefacts for evaluation and "*getting into the papers to actually check they did all the steps*".

Analysing the doctoral candidates' commentary on their lived experiences, reveals that for *the hermeneutic circle* to work, we need to be actively reading, writing (reflecting on our reading), and interpreting (our writings and the original texts from where our written interpretations come). Again, this shows the role of *engagement* and *appropriation* to achieve this hermeneutic concept of *the hermeneutic circle*. In fact, P2 and P3 both talk at length about the criticality of *appropriation* and *engagement* to their understanding of ADR, while also drawing connections between *appropriation* and *the hermeneutic circle*.

### **3.2 Finding Voice**

The four "show & tell" sessions are the spine of the *hermeneutics inspired learning-by-doing pedagogical approach*. These sessions ensure that the doctoral candidate shares their interpretation, harvests peer feedback, and evaluates the shape of their design artefact continuously. These sessions are also designed to allow the doctoral candidates to showcase their progress around understanding ADR and evaluating ADR empirical studies. Following our analysis of the confessional it transpires that these four sessions were also somewhat disarming as the doctoral candidates had to present their design artefacts at each session. This created an environment that forced *autonomization* between the doctoral candidate and their design artefact (the shape of which reflected their "current" ADR understanding). However, the upside of these sessions was of course the peer-to-peer learning for each doctoral candidate, from: (i) hearing peer presentations, and (ii) providing peer feedback. This "show & tell"

discourse was building the shared language of the group and growing the confidence of each doctoral candidate to share and challenge their respective perspectives (*historicity* and *prejudice*). For example, P4 comments “*I learned that to get the best feedback I had to communicate my artefact as best as was possible. The feedback I was getting was only as good as the way I was communicating about my artefact. The more transparent I was with my artefact, or my process, the better the feedback I got in terms of helping to solve the problem*”. In fact, P2 reflects that “*we’re all coming in as experienced professionals in different places, so it’s about knowledge building and re-networking knowledge and experience from different contexts in this space, which I think was one of the richest parts of the learning. For example, hearing [P1] and the others coming with their perspectives, bringing their experiences into the ADR space and seeing it from different angles*”. P3 also calls out the value of the conversational community of peers and the value of *historicity*, especially during the “show & tell” sessions “*I found the presentations throughout the model really informative and that was a key driver for my thinking. The questions posed helped me to move on, otherwise, I’d have just got stuck early on and don’t think I’d have moved. It was also really enlightening to see the different approaches that [P4] and others took*”.

During the 2-hour confessional it became clear that the doctoral candidates were **‘finding voice’** as the 8-session module progressed. This highlighted a clear link to the value of doctoral candidates **‘seeking clarity’**. For example, P3 recalls that “*the peer presentations were super and really-really helpful. The push to say that something was evident or not evident, as opposed to giving the benefit of the doubt*”. In fact, P3 also critiques some of the ADR papers when they suggest that “*you raise a good point [P2] about the problem stage [of ADR], a couple of papers, I thought, just jumped straight into solution and I spent my time going ‘well what was the problem you were trying to solve?’*”. As highlight by one of the authors during the confessional it was very refreshing to see a maturing variety of interpretations to the same task and a “*movement away from mine is not better than what someone else did*”.

### 3.3 Building Confidence

A growing sense of confidence is increasingly evidenced over the duration of the module, specifically in the four “show & tell” sessions, and especially as their design artefact evolves. For example, when the doctoral candidate starts session one of the ADR module, they are assumed to be an ADR neophyte. Furthermore, their design artefact does not yet exist. However, when the doctoral candidate completes the ADR module, they are assumed to be confident in their ability to execute an ADR study and their design artefact has matured (*to evaluate how well the execution of ADR is documented in the IS literature*). As visualised in Figure 1, this evolution is made possible through the actual existence of a design artefact (tangible output) and evaluation of its efficacy in use, along with presentations of each doctoral candidate’s emerging story during the “show & tell” sessions. For example, P3 shares a real sense of pride and confidence in their efforts when they suggest *“I would have loved to go back to the group at the end (after the last iteration) and test out what I did”*. This is further qualified when P3 discloses that *“the writeup was hard, it took me a while to get the narrative, it was all there, just messy, so it needed a nice structure. I found it hard to piece everything together and it took me a while, but I really enjoyed the process”*. This same sense of the final assignment was also shared by P2 who recalls *“I think the key to the learning as well was in that final writeup. This is only where I really got to understand what I was actually doing was about, articulating the things for me as a problem”*. These accounts highlight the challenges of generating a text that will exist independent of the author (*autonomization*). However, the importance of such a task to learning cannot be, and amongst these doctoral candidates was not, dismissed.

Given that *“text is the medium through which we understand ourselves”* (Myers, 2009, pp.188-189) by doing the 2-hour confessional we did in fact *“go back and interview the original author of a document... to try to figure out what someone was thinking at the time”*. A humorous but valuable output of *distanciation* is provided by P1, who reveals that *“I don’t know how I ended up at this level of inception, but looking at my final assignment, I used my artefact to evaluate my own assignment. So, my assignment was another paper I evaluated with my checklist. What am I doing?”*. This revelation was met with considerable laughter during the 2-hour confessional but

also highlighted that what is being written must fit with what is being critiqued, given that the text *“takes on a life of its own”* (Myers, 2009, p.188). In fact, P4 refers to the actions (*autonomization*) of P1 when they suggest *“I definitely have more of an appreciation for the authors of the papers we were reviewing. I was too critical initially about how they communicated their work, but then I started finding value in papers that I found less value in initially, more so when I was trying to produce my own work”*.

Another example of ***‘building confidence’*** was provided by P1, who despite not having time to invest in *“a more granular evaluation”* of the 10 ADR papers during the 8 sessions, revealed that *“I ended up writing a conference paper at the end of the module that looked at how ADR mapped to GAMP (good automated manufacturing practice). I use GAMP in the day job (pharmaceutical automation)”*. In fact, P1 is planning on going further with ADR. They intend to pick a work-based project and bring an ADR flavour to it, in order to see what might be different in terms of the project outcome and what could be learned for future projects. Such an engagement, in the boardroom as opposed to the classroom, can be seen as another chance for P1 to finally get down into the ADR weeds!

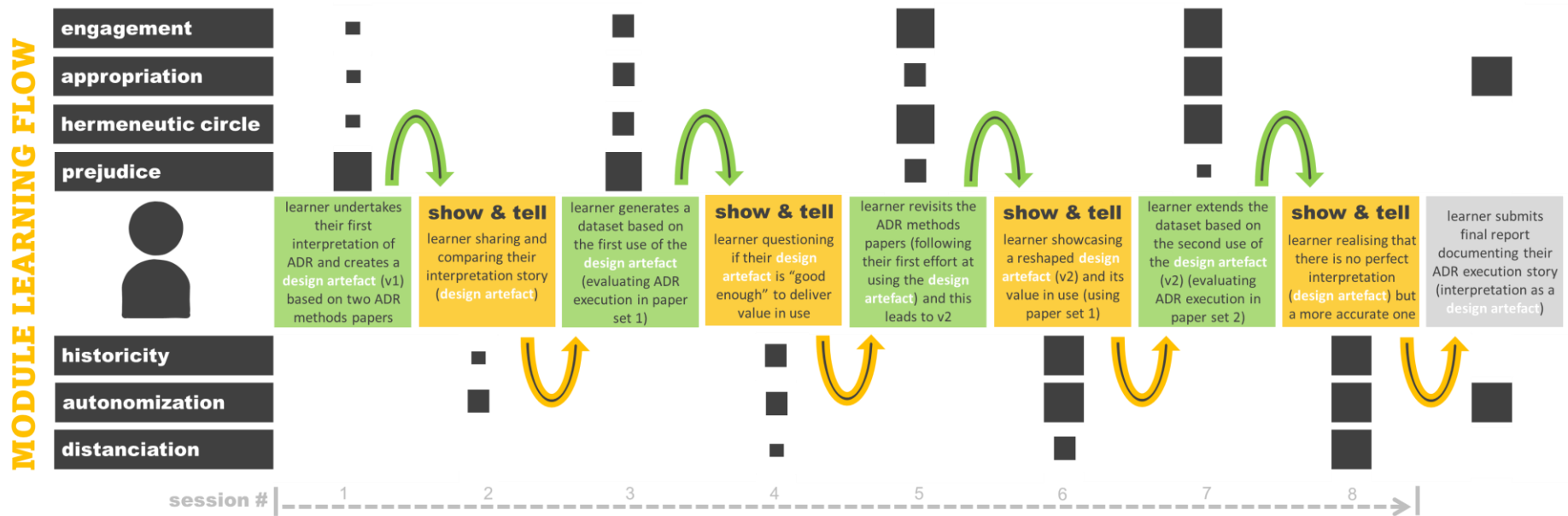


Figure 1. The ADR Module Learning Flow (a hermeneutics inspired learning-by-doing pedagogical approach).



### 3.4 The ADR Module Learning Flow

Reflecting on the learning flow visualised in Figure 1 it is important to highlight two key aspects of the *hermeneutics inspired learning-by-doing pedagogical approach*. Firstly, an IS educator needs to ensure they have a design artefact designed by the learner for their use. This design artefact is the first effort of the learner at interpretation (*appropriation* through critical *engagement* with one or two seminal papers on the methodology being unpacked). The design artefact will reflect the learner's *prejudice*, and will also represent the movement around the texts (e.g. two ADR methods papers) to appreciate differing contexts in an effort to generate new and improved interpretations (*the hermeneutic circle*).

Secondly, over the eight-session teaching period, an IS educator needs to ensure that the design artefact evolves through iterative practice and socialization led by the learner (*appropriation* through critical *engagement* with a small collection (2 sets of 5 papers) of highly relevant papers (each paper documenting the execution of the methodology in the real world). Therefore, the design artefact affords learning opportunities to the learner, in that its 'text' has an autonomous 'objective' existence that is independent of the learner and can be scrutinized by other peer learners (and by the module leaders). This suggests that each learner compares their own design artefacts (resulting from their own meaning making) to those of their peers. This happens on an ongoing basis and very explicitly during the four "show & tell" sessions in the module. This showing of the design artefact itself and the efficacy of the design artefact in use (*evaluating empirical exemplars of ADR execution published in the IS domain*), on multiple occasions, ensures that the learner has the benefit of revisiting their interpretations and seeing their understanding progress over time. It is the "iterative" nature of this learning-by-doing that encourages the learner to have an ongoing *engagement* with the literature and promotes the *autonomization* and *distanciation* between the learner and the design artefact over time. The "iterative" approach and the "show & tell" sessions challenge the learner's *prejudice* and reshapes their *historicity*, along the way, as they appreciate their angle of vision (the angle at which their view of ADR is perceived and translated into their design artefact) and they talk about their design artefact (and its evolution) with their community of ADR peers.

We present the conclusions of our work in the next section.

## 4.0 Conclusions

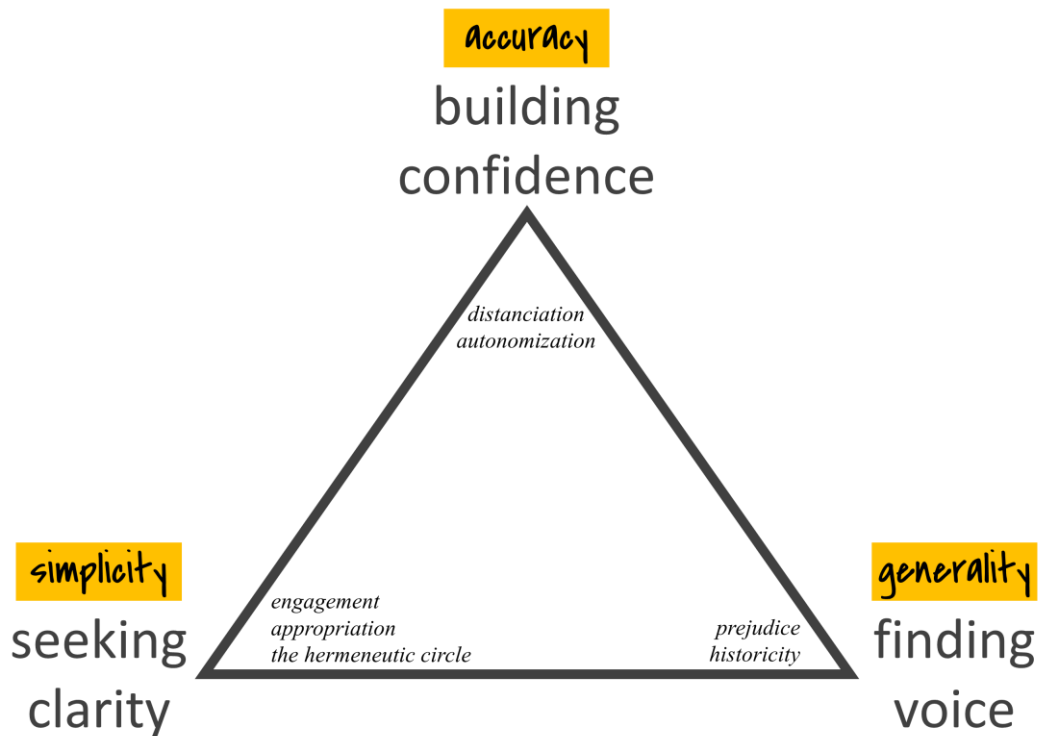
The *hermeneutics inspired learning-by-doing pedagogical approach* is an effective way to expose neophyte researchers to a new methodology (ADR in this case). Furthermore, hermeneutics is a very useful lens for analysing learning in the context of a research methodology (ADR in this case). For example, hermeneutics examines learner *engagement* with new texts, as well as re-engagement with previously used text. This highlights *the hermeneutic circle* in action, where the learner goes back to check/re-evaluate their initial understanding, moving between texts and sections of texts, to appreciate differing contexts, in an effort to generate new and/or improve existing interpretations. In fact, this is observable from two perspectives in this work. For example, some of the doctoral candidates went to great lengths to make sense of “*the apparent absurdities, contradictions, and oppositions*”, while the authors of this paper worked to externalise their understanding (of the lived experiences of the four doctoral candidates) into an abstracted learning flow, thus making sense of “*the apparent absurdities, contradictions, and oppositions*” between their [the doctoral candidates] stories and the model designers’ assumptions (the authors of this paper).

Such engagement contributes to increased *appropriation* and decreases an overreliance on *prejudice*. Over time this engagement also leads to the development of learner *historicity* and their ability to converse with their peers, about the things they read, improves. Furthermore, hermeneutics also highlights the openness of the learner to feedback, along with the importance of *historicity* (ability to converse with peers) and its impact on learner *prejudice*. In fact, seeing as the doctoral candidates work together on the ADR module (over the 8 sessions) they develop a sense of community and growing awareness of their ‘new’ language being spoken and practices being appropriated. It is fair to say, they now have history and can talk to each other. Of even greater interest is the fact that members of two different ADR module cohorts (20/21 and 21/22) came together for the 2-hour confessional workshop, and they appreciated the similarity in their historical circumstances.

Therefore, these doctoral candidates could talk ADR to others in this confessional community.

Therefore, the relationship between learner *appropriation* and *the hermeneutic circle* leads to improved understanding over time. This is often visible in the reshaping of the design artefact, following a reshaping of the learner's interpretation. Furthermore, hermeneutics establishes if the learner is open to embracing *distanciation* and creating a sense of *autonomization* by releasing their interpretations (their design artefact) into the wild. We view both the *autonomization* and *distanciation* concepts as great indicators of the increasing confidence of a doctoral candidate as they move through the 8 sessions on the ADR module. Reflecting further on the concept of *distanciation*, we brought the authors back and through being "interviewed" they reflected on their learning experiences (at that time, which for two doctoral candidates was 12-months prior) and this reflection was also aided by the use of their final submitted assignments. This was a valuable exercise in trying to figure out what the doctoral candidates were thinking at that time and how sticky their learning experience was on the ADR module.

When we design curriculum, we should do so in such a way that we are ensuring (as much as is possible) that our design (learning flow) will enable a learner "*to seek clarity, to find voice, to build confidence*" (see Figure 2). This design principle captures the essence of the theorising process that we observed from our hermeneutic analysis of the confessional accounts of the four doctoral candidates. Furthermore, following our theorizing, as: (i) the designers of the ADR module, and (ii) the researchers of this topic, we conclude that this design principle also reflects the progress on the learner's "*interim struggle*" toward "*the qualities of generality, accuracy, and simplicity*" in theoretical explanation (c.f. Weick, 1995, pp.389-390).



**Figure 2. The ADR Module Curriculum Design Principle.**

It is reported that *importance* is the most critical dimension of relevance for IS practitioners, and similar to (Rosemann and Vessey, 2008 p.3) we view *importance* as research that “*meets the needs of practice by addressing a real-world problem in a timely manner [currently significant], and in such a way that it can act as the starting point for providing an eventual solution*”. Therefore, the work presented in this paper is an effort at addressing current shortfalls in curriculum design. It is hoped that the practicality of the work presented in this paper will help IS educators to avoid the *hidden traps* (c.f. Hammond, et al., 1998) in their decision making (e.g. *status quo trap*, *sunk-cost trap*, *overconfidence trap*, etc.) while promoting a “*focal awareness versus a subsidiary awareness*” with regard to designing learning experiences aligned with a *hermeneutics inspired learning-by-doing pedagogical approach*.

To conclude, we appreciate that hermeneutics “*helps a researcher to interpret the text such that it makes sense [and] helps the researcher produce a story that is believable*” (Myers, 2009, pp.183-184). However, we are conscious that by putting the lived experiences of the four doctoral candidates into narrative form “*the resulting stories do not duplicate the experience.... the experience is filtered... events in a story are*

*resorted and given order, typically one in which a sequence is created*” (Weick, 1995, p.128). Notwithstanding this, our motivation for such an approach is practice-inspired, as we know that “*practitioners can relate to stories*”, and this is an effective way of “*making our research more relevant to practice*” (Myers, 2009, p.218).

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