

# Qualitative Research on Psychological Experience

## A Starting Point for Using Interpretative Phenomenological Analysis

James L. Huff

Department of Engineering and Physics  
Harding University  
Searcy, Arkansas, USA

Joachim Walther

College of Engineering  
University of Georgia  
Athens, Georgia, USA

Brent K. Jesiek<sup>1</sup>, Carla B. Zoltowski<sup>2</sup>, &  
William C. Oakes<sup>1,2</sup>

School of Engineering Education<sup>1</sup> and EPICS<sup>2</sup>  
Purdue University  
West Lafayette, Indiana, USA

**Abstract**— This special session invites academic researchers to temporarily adopt the commitments of interpretative phenomenological analysis (IPA) in order to gain insight into psychological experiences in engineering education research. In this session, we will introduce participants to IPA as a methodology that is committed to understanding the lived experience of particular phenomenon while also recognizing that the researcher plays an interpretive role in generating such understanding. The participants will gain an introduction to *doing* IPA to systematically interpret a transcript through multiple iterations of understanding a text. This experiential learning session will be vibrant with focused activities of conducting qualitative analysis and reflecting on the process. Additionally, we will connect the intentional, analytic processes that are practiced to more holistic principles related to quality in interpretive engineering education research. The expected outcome of this session is that participants will have a robust foundation to begin or advance their inquiries using IPA or other forms of qualitative research.

**Keywords**- *interpretative phenomenological analysis; psychological experience; qualitative research*

### I. PURPOSE STATEMENT

We propose a session that guides participants through the process of leveraging intentional techniques to interpret psychological experience in engineering education. A growing body of research is highlighting how engineering education is a process that engages *whole persons* rather than just students who learn concepts and skills (e.g., [4-10]). Consequently, engineering education researchers are increasingly attending to phenomena of embodied, psychological experience, such as emotion (e.g., [6]) and identity development (e.g., [7-10]). This special session leverages the facilitators' background with a study that employed interpretative phenomenological analysis (IPA) [11-12] as a way to gain insight into these experiences.

### II. DESCRIPTION OF SESSION CONTENT

The proposed session focuses on three specific areas, which are described as follows.

#### A. Psychological Experience

The session will focus on psychological experience as a lens to identify under-explored phenomena in the participants' own contexts (e.g., psychological journeys of identity; emotion in engineering education). After the participants engage in an in-depth process of analyzing a common identity journey, based on an excerpt from an interview transcript, we will invite the participants to consider psychological experiences that are often invisible in their own institutional contexts.

#### B. Interpretative Phenomenological Analysis

The session will introduce participants to IPA as a methodology that is committed to understanding the lived experience of particular phenomenon (e.g., becoming an engineer) while also recognizing that the researcher plays an interpretive role in generating such understanding. Throughout the session, the participants will gain an introduction to *doing* IPA to systematically interpret a transcript through multiple iterations of understanding a text. They will begin by an initial reading for shallow comprehension and end with connecting the transcript to psychological themes.

#### C. Conducting Quality Research

The session will provide a space for participants to think through how they actually analyze text from a common interview transcript. In order to foster this development for researchers, we will share an excerpt from a transcript in our ongoing investigation related to how students undergo the psychological identity journey to become engineers.

Using this common source of data, we will then guide participants through multiple layers of interpretation of this text, thereby creating an immersive process with multiple iterations of feedback from the co-presenters. Toward the conclusion of the session, we will demonstrate how our exercise relates to the assurance of *quality* in interpretive research, using co-facilitator Walther's quality framework [3], as discussed in the following section.

### III. ASSOCIATED PEER-REVIEWED PAPERS

This session is primarily associated with the Huff et al.'s previous work [1], which reflectively analyzed the embodied commitments of conducting qualitative research. Our previous work [1] was presented at the FIE 2014 conference and includes four co-facilitators as authors. In the paper, we detail the transition of one researcher in his journey from attending to the methods of research to identifying and enacting the methodology of interpretative phenomenological analysis (IPA). In the backdrop of this paper was our larger qualitative study that employed IPA to understand a rich picture of how engineering student become engineers, particularly by attending to the fuzzy boundaries between technical and social features of this identity [2]. To ground the discussion of the paper, we drew on a transcript from a single interview in this study conducted with Kevin, a graduating mechanical engineer. We transparently shared a reflexive account of conducting IPA research in order to introduce IPA as an excellent research tool for open areas of engineering education research.

Additionally, we leverage prior work by co-facilitator Walther and his colleagues [3]. Specifically, we draw on their Q3 framework for considering quality in qualitative research. Drawing on the engineering metaphor of quality management, they propose a process-oriented framework of research quality along two dimensions: a process model locates quality strategies throughout the research process, and a typology systemizes fundamental aspects of validation (theoretical, procedural, communicative, and pragmatic) and the concept of process reliability to explicate quality strategies in their fundamental contribution to substantiating knowledge claims.

### IV. SESSION AGENDA

In the session, we intend for participants to form small groups of 4-6 persons. The session will incorporate a blend of activities for individual persons, small groups, and the entire assembly. We co-facilitators will divide among multiple groups to provide guidance, as needed, during the structured tasks of the session. The following is a proposed agenda, approximated for the entire 90 minute range (00:00 – 01:30).

#### A. Welcome and Group Introductions

(00:00 – 00:10): We co-facilitators will introduce ourselves and welcome all to the session. We will then organize the participants into small groups and facilitate introductions within these groups. During this time, we will also hand out all materials related to the session.

#### B. Defining Terms: Psychological Experience and Interpretative Phenomenological Analysis

(00:10 – 00:15): We will provide a brief explanation of these terms but then quickly immerse them into *doing* IPA to examine psychological experience. This activity corresponds to the steps of analysis detailed in Huff et al. [1]. Our intent here is to foster learning among the participants in IPA through shared experience before considering theoretical

features of these terms. Throughout the activity, co-facilitators will wander the room to provide feedback on the various stages of interpretation.

#### C. IPA Activity: Reading an Interview Excerpt

(00:15 – 00:20): We will begin by having two facilitators acting out a real interview transcript from our study on identity development. The particular transcript is an authentic account of Charlotte's struggle to transition to her full-time career as a civil engineer. We begin by reading the transcript to discuss how the transcript is a representation of a real event, both for the researcher and the participant.

#### D. IPA Activity: Individual Reflection of the Transcript

(00:20 – 00:25): After the interview is read, the excerpt will have certainly elicited some personal connections from the individual participants. We will use this time to allow participants to *bracket* off these personal responses by reflectively, writing them down, and then forgetting about them—for the time being.

#### E. IPA Activity: Descriptive Comments

(00:25 – 00:30): We will give participants the opportunity to individually *describe* what they see in individual copies of transcript. What are significant features of the transcript? What is the play-by-play among the text? Each participant will do so in a designated color of ink in the wide right-hand margin.

#### F. IPA Activity: Linguistic Comments

(00:30 – 00:35): We then will give participants the opportunity to document how the participant is using *language*. Each participant will do so in a different color of ink in the right-hand margin of the paper.

#### G. IPA Activity: Conceptual Comments

(00:30 – 00:35): Having considered the description and linguistics of the transcript, the participants will now *ask conceptual questions* of the transcript. This prepares the analysts to consider how the transcript might relate to broader psychological themes from literature.

#### H. IPA Activity: Connecting to Broader Themes

(00:35 – 00:45): We will close the session by guiding participants to connect sections of the transcript to broader psychological themes (see Huff et al., 2014, for a detailed description of these). Participants will note these in the *left-hand* margin.

#### I. Group Reflection on Activity

(00:45 – 00:55): After individuals have completed the analysis activity, we will discuss their reflections of the common activity in two layers: first among small groups and then among the entire assembly.

#### J. How Does Analysis Relate to Knowledge Claims?

(00:55 – 01:05): Following the activity, we will give an overview of how we would use IPA to compare particular findings in the excerpt from Charlotte's interview to

psychological themes in other interviews. Specifically, we will examine how such detailed analysis can result in relevant claims of knowledge.

#### K. Thinking Through Quality

(01:05 – 01:15): Using the shared analysis activity as a guide, we will walk the participants through the Q3 Framework [3] as a general form of considering quality in their own investigations.

#### L. Relevance of Psychological Experience

(01:15 – 01:25): We will close the session by inviting participant to consider questions of *psychological experience* that may be relevant investigations in their own institutions (e.g., the identity development of African-American males at HBCUs, the frustration of first-generation college students in an engineering science course). Responses will be written down and shared.

#### M. Final Group Discussion

(01:25 – 01:30): The session will close with a brief group discussion, which includes time for co-facilitators addressing participant questions.

### V. ANTICIPATED AUDIENCE

We anticipate an audience of those interested in qualitative research in engineering education. Such an audience would include researcher that are new to qualitative investigations. It would also include advanced qualitative researchers who are looking to hone their skills or find others with similar interests. We also anticipate that this session will draw those who are interested in examining *experiential* features of engineering education through a psychological lens.

Furthermore, prior to the conference, we will promote the special session among the 200+ persons who have expressed interest in co-presenter Walther's ongoing research with the Q3 Framework [3]. We will also leverage co-presenter Huff's role as a contact-person in the international IPA network in order to advertise the session and conference to beginning IPA researcher across the United States.

### VI. EXPECTED OUTCOMES

The expected outcome of this session is, primarily, for participants to have a robust foundation to investigate psychological experience using IPA. We expect that this session will demystify features of interpretive analysis that are seldom made explicit, giving participants confidence to dive further into understanding IPA or other qualitative approaches.

Additionally, we will collect three types of data from the session: participant contact information; the annotated transcripts; and the documented forms psychological experience that are relevant to participants. This data will help inform (1) how multiple analysts might provide various informed interpretations of a common text and (2) develop a

repertoire of topics for the engineering education community related to psychological experience.

### VII. PLAN TO DISSEMINATE OUTCOMES

We intend to disseminate outcomes for the proposed session via a full-paper for the 2016 FIE Conference. We will give participants the first viewing of this paper, should they indicate their interest. Additionally, we will provide electronic resources of our own work to participants that indicate interest.

### VIII. RATIONALE FOR INCLUSION AS A SPECIAL SESSION

We propose that the session described be included as a special session at FIE 2015. At the heart of this session, we are making interpretive strategies visible in an experiential learning format. Additionally, we are relying on the knowledge of our participants to socially construct the relevance and landscape of psychological experience in engineering education research. A special session at FIE provides the structural space to optimally fulfill these purposes.

### IX. ACKNOWLEDGEMENTS

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