

**KNOWING THE FABRIC-WEAVING LANDSCAPE:
INFORMATION LITERACY PRACTICE OF THE
WEAVERS FROM THE BONWIRE KENTE CENTRE IN
GHANA**

By

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DECLARATION

I, Franklin Gyamfi Agyemang (Student Number 67124496), declare that *Knowing the fabric-weaving landscape: Information literacy practice of the weavers from the Bonwire Kente Centre in Ghana*, is my work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. I declare that I submitted the thesis to originality-checking software and that it falls within the accepted requirements for originality.

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ABSTRACT

The socio-cultural perspective to information literacy has gained attention in Information Science, with numerous information literacy studies having been conducted in various workplace landscapes; however, not in the craft (artisanal) context. This study investigates the specific context in which Ghanaian Kente weavers (who produce a popular hand-woven fabric), are aided by information literacy practice in an informal workplace to become competent weavers.

Social constructivism, as the research philosophy establishes the basis of this study. Information literacy practice and situated learning theory form the underpinning conceptual framework to explain the study. In line with the practice-based approach, this study employed ethnography as the research design. Data collection took place at the Bonwire Kente Weaving Centre, utilising participant observation and semi-structured interviews with weavers at various levels of competency.

The study revealed that to successfully transition from a novice weaver to a master weaver, access to Kente information afforded by interaction and participation in the practices in the Kente-weaving landscape is essential, and includes knowledge on both on-the-loom and off-the-loom practices. The development of the expertise of Kente-weaving is enabled by the access to Kente information that constitutes the on-the-loom and off-the-loom information. The on-the-loom information includes information on stretching and tying-up, patterns setting, weaving, as well as the challenges of defects fixing. The off-the-loom information constitutes information on weft preparation, warp preparation, heddling and reeding, as well as knowledge regarding the history and traditions informing the weaving of Kente fabric. The study revealed that becoming information literate and competent in Kente weaving requires learning the correct way of using the specific tools needed in this specialised form of Kente weaving. The study also showed that the essence of becoming a competent weaver lay in understanding the role of the human senses; including sensory cues, in the process of Kente weaving.

The study concluded that becoming information literate in the Kente-weaving landscape goes beyond the knowledge construction of the work of the mind of a weaver. It includes the means of accessing the Kente information through observation and participation in the off-the-loom and

on-the-loom practices to develop the competence of the Kente-weaving landscape. Access to Kente information required to make a person competent weaver does not exist outside the social relations and the participation in the on-the-loom and off-the-loom practices of the Kente-weaving landscape.

The study recommends that master weavers afford and create access to the lived actions of the on-the-loom and off-the-loom practices to the novice and junior weavers in the Kente-weaving landscape. Novice and junior weavers should focus on developing the know-how, know-that and know-why knowledge of the on-the-loom and off-the-loom practices, Kente fabrics and patterns. Furthermore, novice and junior weavers must train or develop their senses to an understanding of the cues of the Kente-weaving landscape. For the intended outcomes of the recommendations to be realised, the study proposes a framework for the information literacy practice of weavers.

Keywords: Kente fabric, hand-woven fabric, information literacy, information literacy practice framework, weaving landscape, weaving practices, weaving competence, knowledge and knowing, ethnography, craft landscape, Ghana.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACRL	Association of College and Research Libraries
ALA	American Library Association
CILIP	Chartered Institute of Library and Information Professionals
IFLA	International Federation of Library Associations and Institutions
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNISA	University of South Africa

CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION TO THE CONCEPTUAL SETTING

From a socio-cultural perspective, Bateson (1972:459) views information as any “difference that makes a difference”. For information to make a difference it must mean something, for it to mean something, it “must be situated and made intelligible through the contextual lens of social life” (Lloyd 2010a:247). According to Lloyd (2006a:578), Bateson’s (1972) definition of information underpins the construction of meaning to one’s world and how one knows in an information landscape. For the practice theorists, knowledge (or knowing) is not a cognitive object acquired through mental schemes only. Rather, it is practical, embodied, and is a situated shared activity, involving competent participation in social activity, which unfolds through interaction, co-location and co-participation in the ongoing practices of a setting (Lave & Wenger 1991; Strati 2007; Gherardi 2009a:118; Gherardi 2009b:354; Nicolini 2012:5). Knowledge (knowing) means being capable of participating in the required competence; thus being capable of interacting with the people and performing using the material objects constituting a community of practice (for example, a community of weaving practitioners) (Wenger 1998:137; Gherardi 2009a:118; Wenger 2010:180). Information is an important construct that underlies all forms of knowing or learning, underpinning the construction of meaning to know the world (Lloyd 2006a:578). Information, in whatever form, be it tacit or explicit, tangible or intangible, experiential or affective, has to connote meaning to develop peoples’ perspective and understanding to be vital to their “knowing” (Lloyd 2006a:578).

Studies underpinned by the socio-cultural perspective viewpoint have shown a constitutive relationship between knowing and information literacy (Lloyd 2006a; Lloyd, Kennan, Thompson & Qayyum 2013; Lloyd 2017; Hicks 2018a; Hicks, 2019; Lloyd & Wilkinson 2019). These studies provide a conceptual explanation of information literacy as knowing through situated processes and practices in a setting. Thus, information literacy enables one to know what an information landscape entails and how to develop the know-how (Lloyd 2006a:578; Lloyd 2012; Lloyd et al 2013:123; Lloyd 2017:93; Hicks 2018a:22; Lloyd & Wilkinson 2019:253). For

example, in her study, Hicks (2018a:171-172) observes that information literacy provides language learning students living abroad with shared ways of knowing to situate themselves in their new setting. Information literacy provides them with a way of knowing the cultural sub-system of their new setting. In a related study, Lloyd and Wilkinson (2019:253; 257) observe that information literacy reflects ways of knowing what is agreed upon, shaped and valued by the community one is a member of. In the same study, they observe that through the enactment of information literacy practices such as digital literacy and vernacular literacy, refugees are able to integrate into their new communities. At the workplace, becoming information literate implies knowing how to access all the information modalities legitimised in the landscape (Lloyd 2006a:571; Lloyd & Somerville 2006:195). It involves the relationship between experts and novices in a community of practice in terms of learning and performing in the practice (Lloyd 2006a:571; Lloyd & Somerville 2006:195). The above studies suggest that it is through information literacy that one knows. To know means one is information literate. Therefore, to *know* or to become information literate implies that one is a competent practitioner in a community.

From the practice theoretical lens, information literacy unfolds as a “cultural and a transformative process” in making a novice an expert in a specific context (Lloyd & Somerville 2006:188). Becoming information literate (that is to know) in context means novices connect to the practices of the workplace to access the shared practical knowledge and understanding (Lloyd 2006a; Lloyd & Somerville 2006; Lloyd 2009; Fafeita & Lloyd 2012).

The practice theoretical manifestation of information literacy as a cultural and transformative process suggests that practitioners in a specific community, such as the fabric weavers in Bonwire (a community in Ghana), undergo a transitional process from novice weavers to competent weavers in that landscape, by mastering the processes and activities of the weaving practices to become a competent weaver. Hence, in the weaving landscape, an information literate person would be a competent weaver; one who has mastered the weaving practices and knows the history, philosophies and values of Kente weaving. Influenced by the socio-cultural relationship between knowing and information literacy coupled with the idea that information

underpins knowing, this study draws on the notion that; “regardless of how we come to know, when we do, we become information literate” (Lloyd 2006a:578).

1.2 BACKGROUND TO THE RESEARCH PROBLEM

The art of fabric weaving is a prevailing profession the world over (Dias 2019:4). Fabric-weaving communities are on almost every continent. There are variations as well as similarities in the way the fabrics are woven in these different fabric-weaving communities (Akrofi, Ocran & Acquaye 2016:59; Jones 2019:112). Fabric weaving forms an inextricable part of the individual community members’ traditions. In some communities, either only males or only females do the fabric-weaving, while in others both genders weave the fabrics (Dias 2019:4; Asinyo, Howard & Seidu 2021:40). Examples of hand-woven fabrics in Africa are Korhogo (Ivory Coast), Bogolanfini (Mali), and Abomey Appliqué (Benin) (Blankson-Turner 2015; Akrofi, Ocran & Acquaye 2016).

In Ghana, Kente and Fugu are known hand-woven fabrics. Of these, Kente is the most popular and respected hand-woven fabric produced in Ghana. Kente is a traditional fabric among the people of Asante and Ewe. Kente weaving is a craft practised only by males (Boateng 2018:10). The weavers use a loom to create narrow pieces of cloth which are then put together edge-to-edge to form a big Kente cloth. Different colours of yarns symbolise different aspects of life-related events and meanings (Dor 2014:8). In earlier studies Rattray (1927), Sabutey (2009), and Boateng (2018) acknowledge the knowledge prevalent in the Kente weaving profession. Kente weavers therefore *know their craft*. The Kente weavers possess the aesthetic, material and processual knowledge of Kente production and are therefore able to distinguish between authentic or fake Kente fabric (Boateng 2018:235).

Weavers in the following communities produce the largest quantity of Kente fabric: Bonwire, Adanwomase, Denase, Ntonso, Kpetoe and Tewobaabi. Of all the Kente-weaving communities, Bonwire is the most vibrant in terms of the practices of Kente weaving. Oral tradition asserts that Kente weaving started in this community before spreading to other communities. Although Bonwire is a developed community, the public prefers to call it “Kente Village”, because the

community is popular for its Kente weaving (Asmah, Gyasi & Daity 2015:115). The practices of Kente weaving have brought the weavers together in a common workplace known as the Bonwire Kente Centre. By gathering and working in the Bonwire Kente Centre, the weavers have formed communities of practice to champion the flow of Kente knowledge. According to Sabutey (2009:151), there are three types of weaving practitioners in the Bonwire Kente Centre: master, junior and novice weavers. Some of these weaving practitioners have familial ties to the weaving industry that go back many generations.

Alluding to Schatzki (1996; 2000; 2002), the emplacement of weavers at the Bonwire Kente Centre provides the opportunity for weavers to participate in the practices of the Bonwire Kente Centre. The emplacement and participation of the weavers in the practices at the Bonwire Kente Centre highlight the “people-in-practice” perspective to information literacy as suggested by Lloyd (2012:778). Referring to Lloyd’s (2012:777-778) “people-in-practice” perspective to information literacy, the emplacement and participation of the weavers at Bonwire Kente Centre bring to the fore the social and corporeal information that facilitate shared understanding of the valued information and ways of knowing sanctioned in the Kente-weaving landscape. The way the weavers operate reflects the knowledge domain that bounds the Kente-weaving landscape. Their emplacement and participation in the practices of the Kente-weaving context enact information literacy.

According to Lloyd (2012:777), information literacy enables one to know what a specific landscape, such as the Kente-weaving Centre, encompasses, which in turn assists in developing the required expertise thereof. Inferring from Gherardi (2009a), Lloyd (2009); and Moring and Lloyd (2013), the transition from a novice to junior or master weaver in the Kente-weaving landscape is only possible when the novice participates in information literacy practice¹ to access the various modalities of knowledge in Kente weaving, and information sources that are recognised and sanctioned in the Kente-weaving landscape. Becoming information literate or

¹ Information literacy practice (in the singular form) refers to the collection of information activities that enables learning the practices of a workplace landscape. Pluralisation of the concept of information literacy practice in this study would make it problematic and unaligned with the chosen framework. Refer to Chapter 4 theoretical/conceptual framework.

knowing what weaving entails in the Kente-weaving landscape is the result of the practice of community agreement that synthesises the knowledge and thus how a person can know.

1.3 STATEMENT OF THE PROBLEM

Knowledge is conceived to be cognitive and an individual possession residing in the minds of the weavers (Cook & Brown 1999:383; Asmah, Gyasi & Daity 2015:115; Fusein & Kugblenu-Mahama 2018:727). This is as opposed to the practice view that asserts that knowledge is situated in a community and involves competent participation in social and practical activity, as claimed by Nicolini (2012:5). Asmah, Gyasi and Daity (2015:115) describe the knowledge of the history of Kente weaving as *embedded* in the minds of the local weavers in Bonwire. Fusein and Kugblenu-Mahama (2018:727) also describe Kente weavers as individuals with Kente-*ingrained* knowledge. They maintain that the indigenous Kente knowledge in a Kente-weaving landscape can be lost through the death or migration of knowledgeable weavers should this knowledge not be documented or coded. This advocacy for knowledge management in the Kente-weaving landscape treats Kente knowledge as something which can be captured, stored and transferred in textual or digital form out of its context for future generations.

The above conceptualisation of knowledge as existing solely in the mind of the weavers raises a fundamental question on learning in the Kente-weaving landscape: How do Kente weavers *know*? According to Gherardi and Miele (2018:151), knowledge does not exist distinctly from social relations and social practices. Therefore, conceiving Kente knowledge only as a cognitive activity rather than practical and competent participation overlooks the other sources of information that relate to corporeal and social activities. Alluding to Lloyd and Somerville (2006:188), the above conceptualisation of knowledge in the minds of the weavers would ignore the “whole person” in the weaving landscape, the social relation and the contribution of information literacy to *knowing* the Kente-weaving landscape. This discounts the acquisition of other information sources through social relationships or material-body experiences in the Kente-weaving landscape. Knowing (knowledge) in practice, which implies becoming information literate in a community of practice, relates to having a level of competence about the material objects and the socio-cultural activities that comprise the practice (Gherardi 2009b:355;

Merleau-Ponty 2012:55). Hence, the conception of Kente knowledge in the minds of the weavers fails to realise the role of interactions of people and material elements as relevant to *knowing* or becoming information literate in the Kente-weaving landscape.

The conception of Kente knowledge as a cognitive activity only opposes the practice perspective of knowing (or having knowledge) or being information literate that relates to a level of mastery or competence expressed in the ability to undertake a social and material activity sanctioned in a community. Thus, it ignores the fact that knowing (knowledge) is a practical, situated, shared activity inscribed and embodied in objects (Nicolini 2012:5). The conception of Kente knowledge as a cognitive activity discounts the contribution information literacy plays in underpinning the weaving practices (cultural and transformative processes) that enable the practitioners (including novices) from learning to become competent weavers in the Kente-weaving landscape. It further ignores the role of the human body (hereafter refers to as ‘body’) in becoming informed in the Kente-weaving landscape as well as how novices become informed through their interaction with weavers. To become competent Kente-weavers, novices participate and learn to access the modalities of information and knowledge sanctioned in the Kente-weaving landscape. Information literacy practice, therefore, enables *knowing* the weaving landscape. However, there is no empirical evidence to support how information literacy practice enables *knowing* the Kente-weaving landscape.

1.3.1 Purpose Statement

The purpose of the study is to explore how knowing or becoming competent weavers is enabled by information literacy practice in the Kente-weaving landscape. The rationale is to highlight the facilitation of learning in the weaving landscape and examine how weavers in the Kente-weaving landscape come to *know* what they *know*, and therefore become information literate.

1.3.2 Research Objectives

The objectives of the study are:

1. To identify the elements of competence in the Kente-weaving landscape.

2. To explore how information literacy unfolds in allowing novice weavers to be competent.
3. To explore how being present at the workplace deepens or enacts novices' *knowing* the Kente-weaving landscape.
4. To explore the connection between material objects and information literacy in the Kente-weaving landscape.
5. To explore how the body facilitates *knowing* the Kente-weaving landscape.

1.3.3 Research Questions

1. What constitutes competence in the Kente-weaving landscape?
2. How do novices become competent weavers enabled by information literacy in the Kente-weaving landscape?
3. How do workplace interaction and participation deepen or enact novices' information literacy in the Kente-weaving landscape?
4. How does becoming information literate relate to material objects in the Kente-weaving landscape?
5. How does the body enable information literacy in the Kente-weaving landscape?

1.4 SIGNIFICANCE AND ORIGINALITY OF THE STUDY

Library and Information Science has a culture of investigating professions (Leckie, Pettigrew & Sylvain 1996; Lloyd & Somerville 2006; Lloyd 2009; Fafeita & Lloyd 2012; Isah & Byström 2017; Agyemang, Ngulube & Dube 2018; Pilerot & Lindberg 2018; Du Preez 2019; Agyemang 2021). Notwithstanding this fact, library and information science researchers to date have done little in exploring how fabric weavers engage with information. Among the few studies on weavers are the studies of Ansari (2016), Kuchera (2018), and Yusuf (2012). Besides, researchers in the field of knowledge management and arts education have reported findings that suggest that weavers engage with information practices in the fabric-weaving landscape. Cases in point are studies by Lepistö (2010), Lartey (2014), Torell and Ranglin (2014), Lepistö and Lindfors (2015), Boateng (2018), Hofverberg and Maivorsdotter (2018), Stannard and Mullet

(2018), Makovicky (2020), and Sharma (2020). Hence, the search for empirical evidence in the field of Library and Information Science attests to the importance of this study.

Information literacy studies from the socio-cultural perspective have been conducted in various contexts (Olsson & Lloyd 2017a) focusing on the formal and semi-formal contexts (Bonner & Lloyd 2011; Lloyd & Somerville 2006; Lloyd 2009; Hicks 2018a; Sharun 2021). There have been virtually no information literacy studies examining informal contexts, for example, the craft (artisanal) context, and fabric weaving, to be specific, which has resulted in minimal information on how fabric weavers engage with information in practice. However, socio-cultural literacy studies conducted in various workplace scenarios provide more extensive data. These include the workplace landscape of firefighters (Lloyd & Somerville 2006), ambulance officers (Lloyd 2009), renal nurses (Bonner & Lloyd 2011), chefs (Fafeita & Lloyd 2012), archaeologists (Olsson 2016a), physicians (Isah & Byström 2017), and librarians (Pilerot & Lindberg 2018). Such studies then suggest that numerous information landscapes are prevalent, resulting in diverse ways in which one can become information literate. Hence, if information scientists ignore the ways of learning in other landscapes by perceiving information literacy as a sequence of objective skills, decontextualised, they risk ignoring the ways of learning in other landscapes in becoming information literate (Lloyd 2006a). It is against this backdrop that the study seeks to fill the craft (artisanal) void in the literature by bringing to the fore how fabric weavers learn about their profession; how information literacy is enacted at the fabric-weaving workplace. Exploring information literacy through learning in the fabric-weaving workplace will add to the understanding and advancement of it in the workplace. Such a study is then aligned with Lloyd's (2004) and Olsson's (2016a:418) call for information literacy studies in other contexts, especially the artisanal context.

The Kente fabric and its weavers have been the focus of many studies in Ghana and abroad. The focal points of these studies by authors such as Ohene-Konadu (1994), Sabutey (2009), Tyler (2012), Boateng (2014), Asmah, Gyasi and Daity (2015), Boateng (2018), Cohen (2019), Nunoo, Parker-Strak, Blazquez and Henninger (2021), Robinson, Eglash, Bennet, Nandakumar and Robert (2021) include:

- Tourism potential of the Kente-weaving towns
- The role of social structure in the flow of Kente knowledge
- Historical and future meanings of Kente cloth from a legal perspective
- Mobile phone-based applications for authenticating Kent cloth
- Weavers' identities
- Effect of the Kente industry on the economy; meanings assigned to Kente cloth

Yet, despite these explorative studies, no adequate explanation prevails as to the knowledge factor in this profession; and how learning results in becoming information literate. Hence, the study offers a new perspective on learning and information literacy in the informal setting. The study aims to contribute to knowledge about how this traditional craft is learnt and how traditional craftspeople come to *know* what they *know*. Cultural institutions such as the Bonwire Kente Centre stand to benefit as the study would provide a picture of the characteristics of a competent Kente weaver and the various ways of *knowing* – to become information literate in the Kente-weaving profession.

The originality of the study lies in the fact that it explores information literacy from the socio-cultural perspective in the fabric-weaving landscape. Phillips and Pugh (1999:61-62), and Dunleavy (2003:27) concur, by asserting that research can be said to be original in, but not limited to, looking at areas that have not been investigated previously by people in the discipline and adding to knowledge in a new and novel way. Socio-culturally, fabric weavers have never been the focus of information literacy research in the discipline of Library and Information Science. Although the literature on the socio-cultural approach to information literacy about various workplace landscapes and professional practices is available, specific studies relating to the artisanal (craft) and specifically the fabric weaving landscape are non-existent and would augment current literature.

1.5 DELIMITATION OF THE SCOPE

Drawing from the socio-cultural perspective to information literacy studies in other workplace landscapes, namely those of Lloyd and Somerville (2006), Lloyd (2009; 2010a; 2011), and

Bonner and Lloyd (2011), this study models the concept of information literacy as a practice shaped by the social site, emerging through the modalities of information in the Kente-weaving craft landscape. Although the community would play an important role that certainly influences the workplace landscape, this study focuses only on the workplace landscape. This study considers the Kente-weaving craft practised at the Bonwire Kente Centre a profession, and not merely a sharing of indigenous community knowledge; attention is therefore on the information literacy practice of the weavers specifically on location at the Bonwire Kente Centre. Although the researcher concedes that some practitioners (weavers) weave in their homes, this study excludes the home and does not consider it a workplace in terms of the craft of weaving – where weavers are possibly influenced, not only by their community/home environment but also by other practitioners.

1.6 RESEARCH METHODOLOGY

In every research study, a suitable philosophy that supports the research informs the motivation, intent and expectations for the research. There is no basis for taking any decision on the methodology or research design without first choosing a philosophy for the research (Mackenzie & Knipe 2006). On this basis, the researcher chooses the social constructivist worldview as the philosophy for the study. Research underpinned by a social constructivist perspective, centres on human interactions in a setting or context (Street 2016:11; Creswell & Poth 2018:75).

Since constructivist studies are generally qualitative studies, this study follows a qualitative approach. Creswell (2007:37) defines a qualitative research approach as the study of a research problem by seeking meaning from groups or individuals through specific assumptions, worldviews or theoretical spectacles.

There are several methods or designs utilised when doing qualitative research; in deciding which particular method to use, the researcher relies on Creswell (2007:70-71), and Creswell and Poth's (2018:143-145) advice to choose an ethnographic method or design for this study, particularly if the aim is to describe or explore the work, behaviour, language and beliefs of a group. They further state that the group should have been together for a long period, so that their

patterns of behaviour, shared language and beliefs are discernible. The study explores how people learn to practise weaving, focussing specifically on the work of the Kente-weaving practitioners. The Kente-weaving practitioners share a working culture and language as the practice has been in existence for a long period. The data collection methods used are observation and semi-structured interviews. Table 1 provides an overview of the methodology of this study, and provides the plan and systematic procedure for gathering empirical data to answer the research questions for this study.

Table 1.1: Schematic overview of the methodology adapted from Wessels (2017:16)

Term	Description	Methodology
Philosophy	Worldview about the perception of knowledge and reality	Social constructivism
Approach	The assumption to data and their analysis	Qualitative
Design	plan to follow in conducting an inquiry	Ethnography
Method	Ways and procedures for collecting data	Interview and observation

1.7 DEFINITION OF KEY CONCEPTS

To avoid ambiguities, the key concepts used in the study are defined in the context of their application. It is essential to note that other key concepts not found in this section are defined in the text, where appropriate.

- **Cultural and transformative processes**

Cultural and transformative processes are viewed as the customary and established procedures and activities of practice that facilitates the transition from novice to capable or competent person in a community of practice (Lloyd 2006a:571). In other words, they are the routine activities and processes a novice would have to engage in, to *know* or become information literate in a context.

- **Information literacy**

Various definitions for information literacy, from diverse perspectives, exist in the literature; however, in this study, it is understood to be *knowing* what constitutes an information landscape

by drawing meaning from interactions, processes and experiences involving all the sources and forms of information that are sanctioned in a specific landscape (Lloyd 2006a:570). Thus, information literacy is perceived as an information practice framed by socio-cultural elements in a setting (Lloyd 2007).

- **Information literacy practice**

According to Lloyd (2010b:26), information literacy practice is understood to be knowledge of the sources of information in an information landscape, and having an understanding of how the activities used to access these sources of information are constructed. It is formulated through interaction among people, artefacts, text and embodied experiences that enable both subjectivity and intersubjectivity positions of the individuals in a particular setting. This definition encompasses a way of *knowing* an information landscape by making sense of the symbols, artefacts and people in a community of practice (Lloyd 2011:288).

- **Information literate**

An information literate person is a person who is deeply conscious, linked and fluent with an information landscape (Lloyd 2004:222-223; Lloyd 2010c:56). In this definition, being conscious and fluent is synonymous with *knowing* or being competent to partake in practice. It also means being capable of accessing the information sources, in the broadest meaning of the word, and making sense of the affordance and nuance in the information landscape (Lloyd, 2004:222-223; Lloyd, 2010c:56). An information literate person is therefore one who engages in, and interacts with all the forms and sources of information that constitute a particular information landscape (Lloyd 2004:222-223).

- **Material objects**

In this study, material objects are the vital objects in the dimension of practice and “appear as things to be handled” (Reckwitz 2002:208). Material objects encompassing the tools, technologies, artefacts and bodies are essential in the enactment of practice (Fenwick 2010:104-105; Hicks 2018a:51). In this study, material objects include inanimate objects such as the tools, artefacts and other physical objects such as raw materials, which the practitioners in the information landscape use to perform a task or produce something with. Alluding to Knorr

Cetina (1997), these material objects are the very things that make weaving activity realisable and social. Hence, by removing these material objects there would be no work to do, no worker or community of practitioners, and therefore no sociality (Monteiro & Nicolini 2015:63). Material objects are the objects that have cultural and social history and are therefore entities that are referenced to in conversation, projects and evoke questions, meanings and activities that bring people together (Appadurai 1986; Pilerot & Lindberg 2018:256).

- **Practices**

Practice theorists agree that practices constitute human activities and actions in a social setting (see also, Althusser 1969:166-167; Althusser & Balibar 1970:207; Bourdieu 1977; Giddens 1979:81,104; MacIntyre 1983:175; Bourdieu 1984:54; Giddens 1984:17,21; MacIntyre 1985:187; Wenger 1998:47; Schatzki 1996:89; Reckwitz 2002:249-250; Schatzki 2002:71-80; Schatzki 2005; Schatzki 2006:1864-1865; Kustermans 2016:177). However, they differ in their interpretation, which is why Rouse (2007:500) emphasises that the concept of practice is theoretically incoherent.

Practices, in general terms, are simply the *sayings* and *doings* in a social setting. According to Nicolini (2012:3), the activities (sayings or doings) perpetuate and create all aspects of social life. They could range from ephemeral *doings* to long-term structured activities (Rouse 2007:499). The actions and activities that constitute practice are not occasional activities, but rather regular and repeated actions and activities performed with a specific objective to be reached within a specific social setting (Reckwitz 2002:450; Schatzki 2002:3; Savolainen 2007:120; Feldman & Orlikowski 2011:1240; Nicolini & Monteiro 2017). The regular and repeated actions and activities are the day-to-day, planned and structured activities people encounter and engage in or perform when they work together to get their work done (Whittington 2015:146-147; Kustermans 2016:195). Nicolini (2012:3) states that regularity and repetitive practices can be said to exist as long as the repetitive activities are performed. In this study, practices are conceptualised as the *sayings* or *doings* people engage in to produce a product or offer a service in an information landscape. These include the processes and activities of the information landscape.

- **Weavers**

In this study, weavers could refer to the three levels of fabric-weaving practitioners (i.e. novices, junior weavers and master weavers), in the Kente-weaving landscape.

1.8 OUTLINES OF THE CHAPTERS

The following outlines the chapters after Chapter 1:

- **Chapter 2: Conceptualising information literacy and information practice**

Chapter 2 provides a literature review of the concept of information literacy and information practice for the understanding of the information literacy practice of the Kente-weaving landscape. This chapter examines the socio-cultural perspective, which is the adopted view of the concept of information literacy and information practice.

- **Chapter 3: Information literacy and the workplace landscape**

Chapter 3 considers the role of information literacy in guiding what facilitates learning in the workplace landscape. The socio-cultural perspective to information literacy serves as a background for reviewing studies on both the workplace landscape and professional practice.

- **Chapter 4: Information literacy practice and situated learning: A conceptual framework**

Chapter 4 provides information on the theoretical underpinning of this study. The chapter explains the theoretical view that informs the study. Examination of Lloyd's (2010a) 'framework for information literacy practice' and Lave and Wenger's (1991) situated learning theory provide additional insight.

- **Chapter 5: Fabric-weaving landscape**

This chapter presents information on the nature of the fabric-weaving landscape, and more specifically, the Kente-weaving landscape. Specific information on the practices of Kente weaving contributes to the understanding of the weaving landscape.

- **Chapter 6: Research methodology**

Chapter 6 provides a detailed description of the methodology followed to collect and analyse data for this study.

- **Chapter 7: Empirical findings from the Kente-weaving landscape**

Chapter 7 presents the findings emerging from the data analysis. Themes and sub-themes document the findings.

- **Chapter 8: Discussion of findings from the Kente-weaving landscape**

Chapter 8 examines the findings emanating from the data analysis and presentation vis-a-vis the literature review and the conceptual framework of the study.

- **Chapter 9: Summary and conclusion**

This chapter covers the general summary and the concluding remarks of the study. It provides the implications of the research, limitations as well as the direction for future studies.

1.9 SUMMARY OF THE CHAPTER

The chapter provides the introduction and background to the study. The introduction to the conceptual setting discusses the issue of *knowing* and how it is underpinned by information from the socio-cultural perspective. The relationship between information literacy and knowing is highlighted as constitutive of each other.

In this chapter, the contextual background to the research problem is also presented with specific reference to the information literacy practice and the Kente-weaving landscape. The chapter also discusses the problem statement, purpose statement, research questions, and an overview of the methodology as well as definitions of various key concepts. Chapter 2 will conceptualise the concepts of information literacy and information practice(s).

CHAPTER 2: CONCEPTUALISING INFORMATION LITERACY AND INFORMATION PRACTICE

2.1 INTRODUCTION

Paul G. Zurkowski coined the concept of information literacy in 1974. He was the then president of the Software and Information Industry Association. He used the concept “information literacy” to describe the skills and techniques people require to access information sources and use information tools to solve problems in a work environment (Zurkowski 1974:6). Since the initial use of the phrase “information literacy”, the concept has become a contested aspect of Library and Information Science (Addison & Meyers 2013). Numerous theorisations and perspectives have emanated since then. As a result, the concept “information literacy” elicits various interpretations and perspectives, depending on the tradition, context or theoretical focus highlighted (Nazari 2011:345; Addison & Meyers 2013). This has led Muir and Oppenheim (2002:172) to conclude that there is no generally agreed-upon definition for information literacy, but that the definition of it is by what different people or groups regard as being the requirements of an information literate person. The various perspectives on information literacy foreground the theoretical understanding of what is considered information, learning or knowledge in the field of research (Limberg, Sundin & Talja 2012:95). According to Hicks (2018a:18), the diverse theoretical perspectives to information literacy have brought ‘conflict’ regarding the nature and purpose of it. The ‘conflict’ has also given rise to the pluralisation of the concept, for example, ‘information literacies’, or ‘literacies of information’ (Limberg, Sundin & Talja 2012:119; Lloyd 2017:95-96; Hicks 2018a:17-18). The ‘conflict’ has also considered the notion that the concept “information literacy” relates to aspects of information behaviour and information practices (Lloyd, 2010b; Hicks 2018a:18). The various perspectives to information literacy have also allowed for different applications to everyday living, education and workplace landscapes. This study views information literacy from a socio-cultural perspective. Therefore, the next sections will conceptualise information literacy while emphasising specific socio-cultural features (elements).

2.2 INFORMATION LITERACY

As noted in section 2.1, information literacy is described or interpreted from various perspectives. A well-known and widely used definition by the American Library Association (ALA) (1989) describes information literacy as a set of skills that enables individuals to "recognise when information is needed and can locate, evaluate and use effectively the needed information". The Association of College and Research Libraries (ACRL) uses the following definition that suggests that becoming information literate implies that a relationship exists among the following standards:

- Know: The individual should be capable of knowing when he or she needs information and what type of information is required.
- Locate: The individual should be capable of locating the source of the required information and how to access it.
- Evaluate: The individual should be capable of analysing the source of obtained information in terms of its authority, credibility and authenticity.
- Use: The individual should be able to use information ethically and legally to solve problems (This relates to plagiarism and copyright issues) (ACRL 2000).

According to Wang (2010:27), library associations from various countries used the 1989 ALAs definition to develop a national framework for information literacy. The definition of the ALA states that information literacy is a suite of discrete skills needed to solve information problems and underpin the notion of lifelong learning. ALA (1989) suggests that knowledge can become obsolete; therefore, it is essential to stay informed and remain current. Doyle, using this definition as a basis, elucidates the attributes of a person who is information literate and describes him/her as someone who

- recognises that an intelligent decision is underpinned by accurate and complete information
- recognises the need for information
- sets/asks questions based on needed information

- identifies possible information sources
- formulates search strategies successfully
- evaluates information sources that include computer-based technology
- assesses information
- organises information in such a way that it can be practically applied
- incorporates new information into an existing body of knowledge
- uses information in solving a problem and thinking critically (Doyle 1992:2; 1994:1-2).

According to Behrens (1994:316-317), the ALA and Doyle's information literacy definitions imply that critical thinking skills in the form of understanding and evaluating information are crucial to becoming information literate. She suggests that the mere ability to be able to locate information is insufficient to make one a person who is information literate. In line with the thinking of skills, ACRL (2016:3) defines information literacy as a suite of abilities that are required to discover, understand, use or produce valued information as well as create new knowledge reflectively in communities of learning. According to Wessels (2017:32), the definition of the ACRL precludes a linear approach and places a premium on people as creators of information within their rights, and acknowledges the changing digital environment.

Shapiro and Hughes (1996:3) on the other hand, perceive information literacy as an art encompassing the knowledge to use computers to access information. They argue that information literacy should also critically reflect on the impact and nature of information itself as it manifests in a social, cultural and philosophical context. In addition, Shapiro and Hughes (1996:3) are of the opinion that the technical infrastructure of the setting is an important issue to consider in conceptualising information literacy. They perceive information literacy as essential for developing the cognition of citizens just as the curriculum of basic liberal arts was in medieval society in terms of grammar, logic and rhetoric. With a focus on social inclusion and citizens' empowerment, the International Federation of Library Associations and Institutions (IFLA) conceptualises information literacy as that which promotes social inclusion and empowers people from all walks of life to seek, analyse, use and produce information to reach their individual, social, educational or occupational goals, regardless of their nationality. The

IFLA describes information literacy as the basis for lifelong learning and a worldwide human right (IFLA 2005). The views of Shapiro and Hughes, and the IFLA, suggest that library and computer literacies play a vital role in enabling people to be information literate – especially in terms of education and the culture of the society. Shapiro and Hughes, and the IFLA consider information literacy essential for the ongoing development of democracy as well as helping shape citizens’ intelligence in the information society, rather than being merely producers and consumers of information. Furthermore, the perspective of Shapiro and Hughes, and the IFLA supports those of the Chartered Institute of Library and Information Professionals (CILIP) that information literacy is “the ability to think critically and make balanced judgments about any information we find and use” (CILIP 2018:3). Like Shapiro and Hughes, and the IFLA, the CILIP notes that information literacy skills empower individuals to develop informed views and engage fully with society. Empowerment relates to setting free, information sharing, authority and autonomy (Arua, Eze, Ebisi, Ukwuaba, Ezeanuna & Nwebiem 2018:3). This notion expresses the fundamental ideals for an informed and educated nation (Arua *et al.* 2018:3). As such, information literacy encompasses all forms of learning, be it formal or informal learning that equips a person to identify prejudice and misinformation as well as address social exclusion (CILIP 2018:4-5).

To include additional viewpoints on the concept of information literacy that in addition examine beyond the library and information technology agenda, Johnson and Webber (2003:336) define it as “the adoption of appropriate information behaviour to identify, through whatever channel or medium, information well fitted to information needs, leading to the wise and ethical use of information in society.” They perceive information literacy as related to cultural, social or economic phenomena within the information society. With this socio-cultural perspective in mind, Lloyd (2006a:575,578) adds a broadened definition of information literacy when she describes it as a variable construct that is shaped and understood in relation to context. She, therefore, defines information literacy as the way of knowing what constitutes an information landscape by drawing meaning from interactions, processes and experiences involving all sources and forms of information that are sanctioned in a landscape. She perceives information literacy as an information practice shaped by socio-cultural factors in a context (i.e. social field).

Focusing on the use of information in learning, Bruce (2008:6) conceptualises information literacy as the engagement of learners in information practices that promotes the use of information. She terms this engagement with information, “informed learning”. Bruce, Hughes and Somerville (2012:524) define “informed learning” as using information to advance learning. As such, informed learning constitutes learning through interaction or engagement with information. Informed learning is therefore an awareness of the kinds of information and how these inform; and in some cases, transform people’s personal lives, methods of study and ways of working (Bruce, Hughes & Somerville 2012:524-525).

This notion supports Wang’s (2010:30) observation that information literacy is conceived from different views as a set of discrete skills; use of, or a way of learning and knowing, the ability to think critically and make judgments, create and use information as well as approach engagement with information in various ways and contexts.

2.3 CONCEPTUAL ORIENTATION TO INFORMATION LITERACY

The aforementioned conceptualisations of information literacy suggest some key concepts that deserve to be examined before discussing the socio-cultural perspective to information literacy. The understanding of the concept of information literacy depends on individual perspectives of these key concepts. This observation is shared by Limberg, Sundin and Talja (2012:95). The following discussion provides an orientation to these key concepts that include literacy, learning, knowing (knowledge), information and context.

2.3.1 Literacy

There is no definitive definition for the concept of literacy, but rather opposing accounts of what it means to be 'literate' or 'illiterate' (Roberts 1995:413; Limberg, Sundin & Talja 2012:97; Montoya 2018). Thus, the denotation of who is literate is depended on the definition of the concept “literacy” (Wickert 1992:30). According to Roberts (1995:413), this definitional tussle of the concept “literacy” is seen not just as an intellectual one, but also political. He emphasises

that asserting one definition over the other is tantamount to blessing a definition to dominate the larger educational share and compliance to a given social order.

Literacy has traditionally been conceptualised in terms of the ability to read and write (Roberts 1995:413; Choi, Rose & Friedman 2018:1). According to Roberts (1995:413), this conceptualisation considers individuals as literate when they possess this ability, otherwise they are illiterate. This notion emanates from the autonomous perspective where literacy relates to cognition and context-free functional capabilities of the individual in the acquisition of knowledge and the exhibition of writing and reading skills within a formal instructional setting (Street 1984:433; Lloyd 2010b:13; Perry 2012:53). According to Lloyd (2010b:13), the autonomous perspective focuses on the individual and suggests literacy is non-spatial, boundary-less and context-free. She adds that this conceptualisation presupposes that a person who demonstrates the cognitive-behavioural ability of reading and writing is labelled as a literate person. Along with this conceptualisation, literacy relates to considerable years of formal schooling. Thus, a person is considered literate if he or she has attended school for up to a certain number of years to achieve a reading skill level (Gray 1953:7; Harman 1970:277; Roberts 1995:413).

However, according to Limberg, Sundin and Talja (2012:97) the conceptualisation of literacy has expanded beyond the adoption of reading and writing skills. For example, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) defines literacy as a “means of identification, understanding, interpretation, creation, and communication in an increasingly digital, text-mediated, information-rich and fast-changing world” (UNESCO 2021). This definition highlights the concept of multiple literacies (multi-literacies). Multi-literacies refer to the various ways of relaying and obtaining information and challenge the autonomous perspective of literacy. The concept of multiple literacies upholds multiple domains of literacy (Choi, Rose & Friedman 2018:1; Bales 2019). These domains include digital, computer, library, media and visual literacy (Ferrari 2013; Vellaichamy 2017; Shonfeld, Aharony & Nadel-Kritz 2021).

From the ideological perspective, literacy is understood as a range of social practices that are grounded in specific contexts and inextricably linked and influenced by the culture, ideology and power structures of the community in which the practice is interpreted (Street 1984:433; Barton & Hamilton 1998; Elmborg 2006:193; Lloyd 2010b:14). Thus, this conceptualisation of literacy emphasises the socio-cultural context (social practice perspective) within which literacy is understood (Perry 2012:51-52; Sundin 2015:197). Rather than as something within the individual, the socio-cultural context underscores the fact that literacy foregrounds what counts as knowledge and what people do (including knowledgeable practices) within a specific community (Barton & Hamilton 1998; Brandt & Clinton 2002:340). In addition, Sundin (2015:197) alludes to Latour (2005) and suggests that the ideological perspective of literacy emphasises the socio-material understanding and meaning attributed to material objects (e.g. tools) in practice where inanimate objects and humans are considered as actors that shape practices. In this sense, literacy (knowledgeable) practices go beyond engagement with texts (Barton & Hamilton 1998). According to Tuominen, Savolainen and Talja (2005:337), this means that to be literate implies being capable of enacting and participating competently in a community of practice through the exhibition of what the community practitioners consider as knowledge. This suggests that literacy is contextual and shared. It is in line with this understanding that Grafstein (2002:202) makes the point that it makes less sense for one to claim to be literate in general, rather than be literate about something. This “something” could be any work, including the craft of weaving.

2.3.2 Learning

Learning and information literacy are inextricably entwined; one cannot discuss information literacy without discussing learning (Lloyd 2010b:14). The question of what constitutes *learning* therefore needs to be examined in this study. However, like literacy, there is no commonly agreed definition of learning. Rather, there are different and overlapping definitions (Illeris 2009:12). Gee (1989:20) and Eraut (2000:114) see learning as a process of acquiring knowledge from another person not necessarily sanctioned as a teacher. Their perception of learning suggests a cognitive view where learning equals the transformation of mental structures through information acquisition and processing. That is, learning takes place when there is a change in

the content of an individual mind through the acquisition of ideas (Hager 2004:242-243). This emphasis on mental learning recognises the duality of the human being, which, as Hager states, is attributed to the notion that the mind and body are distinct.

In the field of Psychology, with specific reference to behaviourism, learning is defined as permanent and “observable change” in a person’s knowledge or behaviour (Mayer 1982:1040; Shuell 1986:412; Weinstein & Mayer 1986; Cherry 2019). According to Weinstein and Mayer (1986) and Cherry (2019), the “observable change” results from the learner’s experience in the environment.

Researchers such as Bandura (1977a), and Bingham and Conner (2010) adopt a socio-cognitive view of learning. Bingham and Conner (2010:19) define learning not just as a process but a transformation that takes information, and when internalised and mixed with experience, changes what people know. Bandura (1977a), and Bingham and Conner (2010) assert that learning is based on input and reflection that occurs through interaction with and from others. For Bandura (1977a), learning is a change in the mental processes that creates the capacity for a person to demonstrate different behaviours. Bandura (1977b:139-140) suggests learning is an information-processing mechanism through which social interaction influences a person’s behaviour. By way of example, he states that through observation, modelling and imitation, people gain new information and behaviour. He also asserts that learning does not always result in behavioural change. In line with this socio-cognitive view, Billett (1994a; 1994b:12-13) defines learning from the setting of the workplace as a means of acquiring knowledge and skills in the relevant activities and vocational tasks that make up the workplace through the guidance of a skilled mentor. According to Billett (1994a), the acquisition of knowledge and skills takes place through participation in social practices of the workplace. Learning in terms of participation in social practices relates to where individuals become “active participants in the practices of social communities” and construct identities that relate to these communities (Wenger 1998:4). Wenger relates identities to the change in the individuals that reflect the membership of the community (Wenger 1998:4). This socio-cognitive definition for learning resonates well with the socio-cultural perspective adopted in this study.

There are different categorisations of learning, namely, formal, non-formal and informal (Eraut 2000; Billett 2001a; European Commission 2001; Livingstone 2001; Beckett & Hager 2002). According to Eraut (2000) and the European Commission (2001:32-33), formal learning is defined as that structured type of learning that takes place in training or educational institutions such as universities and results in the award of a certificate. This form of learning is structured. Non-formal learning, on the other hand, is unstructured and is provided outside formal educational institutions (European Commission 2001). The European Commission (2001:32-33), and Beckett and Hager (2002:115) define informal learning as a practice-experiential-based learning activated by individual learners at the workplace.

2.3.3 Knowledge and Knowing

Knowledge and *Knowing* have been subjects of education research (Bolisani & Bratianu, 2018:1). Lexico (2022a) describes knowledge as:

- Facts, information and skills gained through education or experience.
- Familiarity or awareness gained by experience of a fact or situation.

Lexico's description suggests an empiricist's view of knowledge. These views uphold the notion that a person can only *know* by experience.

Nonaka and Takeuchi (1995:87) on the other hand, describe knowledge as "justified true belief." According to Bolisani and Bratianu (2018:5), Nonaka and Takeuchi's (1995:87) description assumes three basic conditions. These conditions are:

- The truth condition: The condition that qualifies a person to know only when the supposed proposition he or she claims to know is true. The truth condition differentiates between opinion and knowledge.
- The belief condition: The condition that demands that a person should believe in the proposition he or she knows.
- The justification condition: The condition that requires a person to justify practically that his or her belief is true (Neta & Pritchard 2009).

The justification condition of knowledge suggests that knowledge relates to competence. Dombrowski, Rotenberg and Bick (2013) on the other hand, take an integrated approach to understand what knowledge is. They perceive knowledge to consist of three forms, namely experiential, skills, and knowledge claims. Experiential knowledge is the kind of knowledge people get through their sensory systems in their contact with the environment, and then it is processed by the mind (Dombrowski, Rotenberg & Bick 2013:38; Bolisani & Bratianu 2018:8). Bolisani and Bratianu (2018:8) give the example that to learn about snow, the person must first touch, smells, and taste it. This example suggests that knowledge is underpinned by access to information. That is, touching, smelling and tasting snow provide access to information to *know* snow. Dombrowski, Rotenberg and Bick (2013:38-44) describe skills as practical knowledge of how to do something. They refer to skill as know-how knowledge. Knowledge claims are known or claim to be known through explicit expression (Dombrowski, Rotenberg & Bick 2013:38; Bolisani & Bratianu 2018:8).

To the practice theorists, knowledge is rooted in and is an inherent part of action or practice (Savolainen 2009a:5). They characterise knowledge as something that does not reside in an individual's head or a book, but rather stems from the competence to perform the activities of a setting, using the material objects (Gergen 1985:270; Gherardi & Nicolini 2000:331). However, they prefer to use the term "knowing" as it connotes activity, doing, action and process that unfolds over time and as such "knowing" is deemed inseparable from practice (Blackler 1995; Orlikowski 2002:250-251; Gherardi & Miele 2018).

Nicolini (2006:2-3) and Gherardi (2008:518) define knowing in three different ways in relation to practice, namely mutual constitution, containment or equivalence. In the relationship between knowing and mutual constitution, the focus is on the interaction and co-construction of practice and knowledge (Nicolini 2006:2-3). Depicting this relationship, Orlikowski (2002:250-251) conceptualises knowing as action or doing. In this sense, action or doing is inseparable from practice and reciprocally constitutive. According to Orlikowski (2002:250-251), knowing is perceived in terms of human knowledgeability, which does not exist in objects, routines, bodies

or the mind. Rather, she views knowing as a recurrent social accomplishment (re)constituted in mundane, everyday practice enacted through people.

In line with Ryle's (1949:31-33) consideration of knowledge in action; that is, the 'knowledge how' to act, Schon (1983:49) and Gundo, Mearns, Dickinson, Chirwa and Gundo (2021:3) perceive knowing as the exhibition of skills in practice. Similarly, Maturana and Varela (1992:27, 29) think that knowing is effective action. They claim knowing and doing are constitutive: knowing is doing and doing is knowing. They further explain that focusing on knowledge obscures action in knowledgeableability (Maturana & Varela 1992:27, 29).

On the relationship between knowing and containment, knowledge is not perceived as an individual property, but rather as residing in situated practices. Illustrating this relationship, Wenger (1998:141) defines knowing as arising from the context of particular practices, in which knowing emanates from experience, meaning-making and a "regime of competence". In his definition, "regime of competence" means the norms and conditions by which a person is recognised as being capable to perform in a community of practice. According to Wenger's definition, knowing means competent participation in practice (Wenger 1998:137-141; Wenger 2010:180).

On the relationship with equivalence, knowing is inherently tied to the socio-material practices (social processes and activities) by which novices develop expertise (Nicolini 2006:2-3). Underpinned by a relationship of equivalence, Gherardi (2009a:118) defines knowing as something that is done together in every mundane activity. Thus acting competently in practice is synonymous with knowing the situated practices of a field (Gherardi 2009a:118). It is argued that knowing is a situated shared activity that unfolds through interaction, co-location and co-participation in the ongoing practices of a setting involving the thoughts, the body and the senses (Lave & Wenger 1991; Strati 2007; Gherardi 2009a:118; Gherardi 2009b:354; Nicolini 2012:5).

Knowing connotes learning with thinking and acting rather than being a cognitive process of the mind only (Billett 2001b; Billett 2001c:214; Gherardi & Miele 2018). This suggests that knowing-in-practice is a socio-cultural phenomenon of practical accomplishment that conveys

the notion of materiality and handiwork of a craft's skills in practice (Gherardi 2001:136; Gherardi 2003:352; Gherardi 2008:517-518; Gherardi 2009a:118). This idea stems from the notion that knowledge and learning are conceived as forms of social and material expertise depicted in the knowledgeability in action in a socio-cultural and historical context (Nicolini, Gherardi & Yanow 2003; Nicolini 2006:2).

The discussion so far suggests that knowing is not produced or achieved cognitively through mental schemes only, but rather knowing is a practical and embodied endeavour that relates to competence. Competence is context-specific and situated within the social settings into which a person enters and operates (Wenger 1998). In this conception of competence, the skills of the social setting are not grounded within the person; rather the skills are grounded in performing the practice of the social setting (Wenger 1998; Lloyd 2010b:144-145). It is by engaging in the practice that a person becomes competent (Lloyd 2010b:144-145). Therefore, as Lloyd (2010d) suggests, knowing is not attained through people's engagement with textual or encoded knowledge only, but also through people's engagement with objects, artefacts, symbols, other people and situated activities or practices.

2.3.4 Information

The concept 'information' is core to the understanding of this study. Information has been described as neither simple nor unambiguous to define (Limberg, Sundin & Talja 2012:97). In information literacy research the concept of 'information' is understood differently; for example, Buckland (1991:351) identifies three dimensions of information:

- Information-as-process – here, information is conceptualised as that which changes what someone knows (i.e. the activity of informing or being informed).
- Information-as-knowledge – here, information is conceptualised as that which is perceived in information-as-process (i.e. that which is imparted or gained through information-as-process).
- Information-as-thing – here, information refers to physical entities or objects such as data and documents regarded as being informative.

According to Pilerot (2014a:20) and Limberg, Sundin and Talja (2012:97), Buckland's (1991:351) dimensions of understanding "information" suggest the existence and materiality of information, especially the third dimension. The third dimension also suggests the content of documents that are in textual form. According to them, Buckland's dimensions of understanding "information" also suggests information is related and rooted in specific activities.

On the other hand, Bateson (1972:453; 1987:12) views information as any "difference that makes a difference". For information to make a difference, it must mean something; for it to mean something, it "must be situated and made intelligible through the contextual lens of social life" (Lloyd 2010a:247). According to Lloyd, the difference could be in either, or in a combination of the following three information modalities:

- Social information – this modality of information is tacit and affective, and is situated, shared, transferred and accessible through interaction and social networks in a community of practice (Lloyd 2009:413). This modality of information reflects and facilitates meaning-making about the socio-cultural features of a community of practice by familiarising the novice (newcomer) with the reality, continuing beliefs, values, narratives and stories of the professional practice (Lloyd 2009:413; Lloyd 2011:290).
- Textual (epistemic) information – is a 'know-why' or 'know-that' (facts, propositions and concepts) information that is usually codified or written in text (print or digital) that spells out the rules and regulations for practice (Lloyd 2010b:161). This notion corresponds with Buckland's (1991:351) notion of information as a thing.
- Corporeal information – is experiential and action-oriented information drawn through the relation with the sensory aspects of an information landscape that informs practitioners' bodies (Lloyd 2009:415). Corporeal information is accessed physically through the body in practice (Lloyd 2011:291). Corporeal information is accessed through observation in practice through tactile and sensory activities associated with the practice (Lloyd 2011:291).

For Bates (2009:2381), information is the ‘impression’ people have through interaction with the environment. According to Bates (2009:2381), this impression enables people to deduce a new understanding and thoughts, which may change or add to their knowledge. In the definitions of both Bateson (1987:12) and Bates (2009:2381), information is understood to be an idea that, when accessed, makes a difference or infers change. Implicitly, the difference is a change of a kind to knowledge that includes ways of knowing (Bateson 1972:323:386; Lloyd 2017:94). This, according to Lloyd (2010b:11), suggests that information is transformative, which when interacted with, transforms the individual to become different (change) – even in the smallest sense. This notion corresponds with Buckland’s conceptualisation of information-as-process. Hence, alluding to Buckland, Bateson and Bates’ definitions of information, information in this study is conceptualised as that which matters and makes a difference or change to knowing-in-practice, from either inner or outer sources. This implies a contextualised view of information to be meaningful in a setting.

Lloyd (2010b:11-12) suggests that information produces knowing in the context of specific practices. Information, in whatever form or modality, be it textual (epistemic), corporeal or social, has to connote meaning to a person to develop the perspective and understanding of knowing (Lloyd 2006a:578). This suggests that information is socio-culturally oriented; that which makes sense or creates meaning from symbols, doings and sayings as a social construction of the context or practice (Cornelius 2004; Sundin & Johannisson 2005:37; Isah 2012:72). In this sense, information can be said to be accessible socially, corporeally (through the body) or textually (Lloyd 2010b:3). Thus, in any given setting, information is experienced differently about the situated activities.

2.3.5 Context

Context as a term has been conceptualised by many researchers (Taylor 1991; Dervin 2003; Dey, Abowd & Salber 2001; Schatzki 2002; Bates 2009; Savolainen 2009b). Schatzki (2002: xiv, 20) conceptualises context as a setting that encompasses and determines phenomena, which in turn encompasses entities and defines their existence and being. This definition suggests that context

predefines practices that prefigure the kinds of activities that will happen (Schatzki 2002:61–63; Lloyd 2010b:157). Schatzki (2002:61–63) characterises three aspects of context as that which

- encompasses the phenomenon
- defines the phenomenon and entities within it
- has constituents or components and characters that vary the phenomenon or entities that exist in settings.

Various definitions or descriptions of context that align with Schatzki's (2002) conception of context include those of Dervin (2003), Hager and Smith (2004), and Savolainen (2009b). Savolainen (2009b:38) defines context as a kind of container in which phenomena and activities reside and take place within time and space. He describes the container as the boundary that envelops the phenomenon and activities. Dervin (2003:130) on the other hand, uses the environment of fish to describe what context is. She describes "context as something you swim in like a fish. You are in it, it is in you". According to Lloyd (2010b:156), Dervin's (2003:130) perception of context acknowledges and suggests a paradoxical relation of the individual and context, in that individuals are products and producers of the context. Hager and Smith (2004:34) conceptualise context in terms of workplace where they describe context as the surroundings within which work is done and the probable influences the surroundings have with regard to the way work is done. According to Hager and Smith (2004:36), dimensions such as culture, history, norms, practices and the tools of the workplace shape the context. However, for Dourish (2008:22), context could refer to what people do.

Sonnenwald (1999:180) mostly agrees with Allen's (1997) conceptualisation of context as a "situation". However, according to Sonnenwald (1999:180), context is in some way larger than a situation and may comprise varied situations. She continues by emphasising that different contexts may have different kinds of situations. Cool (2001:8) appears to agree with Sonnenwald's (1999:180) position on context and situation. Cool (2001:8-9) explains, "contexts are frameworks of meaning, and situations are the dynamic environments within which interpretive processes unfold, become ratified, change, and solidify". She gives the example that

when individuals interact with information sources, an interaction situation is created, though within a specific context.

Some researchers have conceptualised context to interaction and use of information within an environment. For example, Bates (2009:2381) conceptualises context as the environment in which people come into contact and interact with information. Taylor (1991:218) on the other hand, conceptualises context as an 'information-use' environment in an everyday life setting or workplace. For Dey, Abowd and Salber (2001:106), context is any information that characterises and elaborates the situation of entities (i.e. person, place or object) in terms of the location, identity and state of a group of people as well as computational and physical objects.

Despite the numerous notions of the concept "context", Agarwal (2011:48) believes that concept is 'ill-conceptualised' and inconsistently applied. Concerning information seeking, Agarwal, Xu and Poo (2011:1088) conceptualise context as the state defined by the combination of the information seeker, the information source, and the information need at any given time. According to Agarwal, Xu and Poo (2011:1088), the attributes of the information seeker, information source and the information need (i.e. problem situation that necessitates the information need) interact with each other to define the context of an instance.

In analysing the above notions of context, the current study conceptualises context as a kind of unique setting, environment or situation within which people's actions, doings and sayings are interpreted. This could be an everyday setting or workplace.

Having provided a conceptual orientation to the key concepts that underpin the meaning of information literacy, the next sections discuss the socio-cultural perspective to information literacy.

2.4 SOCIO-CULTURAL PERSPECTIVE TO INFORMATION LITERACY

There are many different views on information literacy, as has previously been noted, but it is outside the scope of this research to examine them all. These different views have influenced the

conflicting pluralisation of the concept of information literacy. For example, the understanding of information literacy from a phenomenographic, socio-cultural or discourse analysis view led to the pluralisation of the concept as in “information literacies” (Limberg, Sundin & Talja 2012:119). On the other hand, the need to emphasise how information literacy is situated and enacted in context among people in connection with information, knowledge and ways of knowing has necessitated the adoption of “literacies of information” (Lloyd 2017:96-97). Researchers such as Addison and Meyers (2013) have noted that the various perspectives adduced to information literacy emanate from different traditions. These different traditions relate to the conceptual orientation provided in section 2.3 (2.3.1-2.3.5). The perspective that would best suit this study is the socio-cultural perspective.

The socio-cultural perspective to information literacy is a theoretical perspective on pedagogy that emanates from the work of Russian psychologist, Lev Simkhovich Vygotsky (Vygotsky 1978; Vygotsky 1986). According to Lloyd (2010b:26) and Cherry (2022), researchers who hold this perspective foreground the notion that learning is largely a social phenomenon. The socio-cultural perspective emphasises the interaction between people and the culture in which they live as key to their learning (Cherry 2022). Researchers that advocate the socio-cultural perspective are of the opinion that individual mental reasoning is influenced by the surrounding culture, as well as the historical and institutional context (Scott & Palincsar 2013). This, according to Scott and Palincsar (2013), implies that it is through participation in working that a learner accesses culturally valuable skills and expertise.

In response to the critiques of both the behaviourist and cognitivist perspectives to information literacy as noted by early researchers like Bruce (1997:36-37), predominantly Australian and Nordic researchers have championed the socio-cultural perspective to information literacy (Hicks 2018a:21). The socio-cultural perspective to information literacy appears distinctive for different groups of people within different contexts (Lundh & Lindberg 2012:158; Hicks 2018b:70-71). From the socio-cultural perspective, information literacy is understood as ways of knowing what constitutes an information landscape by drawing meaning from interactions, situated processes and experiences involving all the modalities of information that are sanctioned in the context of the information landscape (Lloyd 2006a:570,575,578). According to Lloyd (2006b:570),

knowing what constitutes an information landscape is acquired through participating in activities, procedures and interactions in a contextualised practice, enabling access to the information modalities sanctioned in the practice. This conception recognises information literacy as an information practice that encapsulates mastery of information skills and activities in the information landscape (Lloyd 2011:285). Details of information practice are discussed in section 2.5.

According to Lloyd (2010b:156), the context matters from the socio-cultural perspective to information literacy. She asserts that any exploration of information literacy has to consider the context. Lloyd and Williamson (2008:9) consider the exploration of the context as the first task to understanding how information literacy is revealed as socio-cultural and context-specific processes. Lloyd (2006a:575,578; 2010b:1) perceives information literacy as a variable construct that is shaped and understood according to context. Lloyd (2010b:1) is emphatic that information literacy is context dependent and therefore requires a deep understanding of the intricate cultural, social and collaborative processes, activities and arrangements that shape information and its usage in a given context such as the sayings and doings, rather than a mere development and application of information skills.

There is a need to unpack and explain the critical conceptual features that manifest in the socio-cultural perspective to information literacy to ensure an understanding thereof. These features are the information landscape, literacy and knowing.

2.4.1 Information landscape

An explication of the information landscape is integral to the conceptualisation of the socio-cultural perspective to information literacy. The term “information landscape” has been conceptualised by researchers in Information Science. For example, Skovira (2004:309) conceptualises the information landscape from an organisational context, regarding it as a kind of information ecology. Information ecology is understood as an information environment constituting the socio-cultural and political sub-systems to understanding information creation, flow and use in an organisational context (Davenport & Prusak 1997:3-6). Skovira perceives

information landscape as a place of framed information use where the four constituting elements come into play to the understanding of information use and design; these elements are content, processes, people and relationships (Skovira 2004:312-313). The issue of these four elements brings the issue of practices of the landscape to the fore. These constituting elements create the notion of practice, which implies that only practice can integrate these elements to constitute an information landscape.

Lloyd (2010b:2-3), on the other hand, conceptualises “information landscape” as the contextual communicative space reflecting the acceptable forms and sources of information that are understood by people who share a practice. Lloyd (2010b:9) views the information landscape as an inter-subjective created space that results from people’s interaction, in which information is constructed and shared, and ultimately becomes knowledge. She notes that the information landscape is underpinned by specific values, understanding and acceptable ways of doing things that characterise the interactions among people as they co-locate and co-participate in practices of a site.

Analysing both Lloyd and Skovira’s conceptualisations of the information landscape, it is evident that they both agree that an information landscape is a social field or place involving practices. Lloyd (2010b:3) further suggests that it is in a social field that people engage with the contextualised information to understand and make judgments about practices in a manner acceptable to others in the same contextual space, for example; education, community or workplace.

According to Lloyd (2006a:572), information landscapes are shaped and identified by varied topographies, climates, and ecologies. Her view on landscapes tends to suggest that landscapes consist of various elements; the combination of which, and how they are structured determines the nature of the landscape. Based on the elements, landscapes become shaped and are therefore interpreted, understood and learnt from (Lloyd 2006a:572). The structure and elements afford people opportunities to engage with the modalities of information that characterise the different natures of landscapes (Lloyd 2006a:572).

It is from the above understanding that the fabric-weaving setting is conceptualised as an information landscape in Chapter 5. The fabric-weaving landscape constitutes a workplace comprising elements such as practices, content, processes, people and relationships.

2.4.2 Literacy

Literacy, from the socio-cultural viewpoint, is conceptualised from the ideological perspective where literacy is understood to be a range of social practices that are grounded in specific contexts and inextricably linked and influenced by the culture, ideology and power structures of the community in which the practice is interpreted (Street 1984:433; Barton & Hamilton 1998:7; Elmborg 2006:193; Lloyd 2010b:14). The socio-cultural perspective of literacy implies that information literacy does not emerge in a vacuum, rather it is contextualised within the elements and structures of a specific context, setting or site (Grafstein 2002:202). Hence, the socio-cultural perspective views becoming information literate as a way of satisfying information needs or learning how to correspond with other members, seeking, and using the information within a social practice (Gee 2002; Talja, Tuominen & Savolainen 2005:86; Lundh & Limberg 2008:93; Sundin 2008:27; Lloyd & Wilkinson 2016:337; Pilerot 2016:418; Hicks 2018a:26). Information literacy is seen as an embodied ability to comprehend and be familiar with the creation, seeking, use and value of information in a specific practice (Lloyd 2011:281; Pilerot 2016:414; Hicks 2019:1191).

2.4.3 Knowing

As discussed in section 2.3.3, *knowing* is a situated, shared activity, involving competent participation of the social that unfolds through interaction, co-location and co-participation in the ongoing practices of a setting involving thoughts, the body, and the senses (Lave & Wenger 1991; Strati 2007; Nicolini 2012:5; Gherardi 2009a:118; Gherardi 2009b:354). However, for this study, *knowing* is conceptualised as learning through experience and ‘sense-making’ of situated practices to acquire competence or skills (‘know-how’ knowledge) by participating in the training and practices of a community of practitioners. It should be noted that this kind of learning is the socio-cognitivist notion of learning as defined by Bandura (1977a; 1977b:139-

140), Billett (1994a; 1994b:12-13), Bingham and Conner (2010:19). To *know* means to be competent in practice; that is being able to exhibit the conceptual and practical skills ('know-how') of the information landscape. In other words, individuals who *know* are competent practitioners of the information landscape.

As a variable construct, information literacy is described as “ways of knowing”; that which makes up an information landscape (Lloyd, 2006a:575,578). According to Lloyd (2010b:27) “ways of knowing” means information literacy facilitates knowing about:

- The ways information is situated in an information landscape.
- The valued and sanctioned information in an information landscape.
- The appropriate information activities effective for information access.
- The ways to use information to achieve a site-specific outcome (i.e. competence).

Following this, “ways of knowing” is conceptualised as a means of learning to become competent practitioners in an information landscape. Thus, the “ways of knowing” are the means of learning through accessing and using the sanctioned and valued information to attain competence in an information landscape.

2.5 INFORMATION PRACTICE²

Information practice as part of practice is constituted in an information landscape. Although information practice constitutes a more sociological, dialectical, dialogical and contextual focus on a group of people as noted by researchers such as Talja (2005:123), Savolainen (2007:120), Byström and Lloyd (2012) and Isah (2012:66), there are various definitions and interpretations of the concept of information practice.

² There are different interpretations of the concept of information practice(s). It must be noted that some authors pluralise the concept as information practices, some do not. In this study, the point of departure of the concept of information practice is Lloyd’s definition, which is in the singular form.

McKenzie (2002:25; 2003:19) refers to information practices as the tangible activities which are often and routinely reproduced to search for and meet a known need or/and serendipitous encounter of information from an unexpected source that could be a response to current or future needs. In her understanding of information practice, she proposes the modes of information practices, as, active seeking, active scanning, non-directed monitoring, and by proxy access to information (McKenzie 2002:38-41; 2003:26-27). Savolainen (2007:122) asserts the point that though active seeking is also referred to in information behaviour research, these activities are approached differently depending on the context, especially in the seeking and use of information in information practice research. McKenzie (2002:41-43) gives examples of active seeking as list-making and asking questions. This presupposes that her understanding of information practice is not limited to seeking information, but also deals with communicative elements like the framing of questions. For active scanning, she gives examples such as opportune questioning, staying connected and monitoring the process. For non-directed mode, she gives the example of reading the dailies with no other intent than being informed. The proxy mode is exemplified by a situation where a gatekeeper on behalf of the information seeker, using any of the other modes, seeks information (McKenzie 2002:38-41; McKenzie 2003:26-27).

Savolainen (2008:2) on the other hand, perceives information practice as a suite of socio-cultural sanctioned ways to identify, seek, use and share information from varied sources such as television, newspapers and the internet. Similarly, Roos and Hedlund (2016:897) understand information practice as a socio-cultural sanctioned way to seek, use and share data and information from different sources. By analysing Roos and Hedlund (2016:897), and Savolainen's (2008:2) definitions, it appears that what constitutes information practice is focused on the seeking and use of social and textual information modalities. Jarrahi and Thomson (2017) corroborate this point as they observe that Savolainen's (2008:2) definition focuses on explicit information seeking and use.

Dourish and Anderson (2006:335) conceptualise information practice as how information is shared, withheld, and managed "collectively", within an everyday-life context. From the definition, Dourish and Anderson (2006:335) emphasise the key word "collectivity" in their conceptualisation of information practice. Similar in meaning to Dourish and Anderson's

(2006:335) conception of information practice, Nathan (2012:2256) sums up the meaning of information practice as “a collectively recognised and negotiated activity for creating, recording, organising, storing, manipulating, and sharing information”. Dourish and Anderson (2006:335) and Nathan (2012:2256) all suggest that information practice is social and collaborative work with information in a community. This makes information practices rooted in work and the various social practices of a community (Talja & Hansen 2006:128). This, according to Ostensen, Bragstad, Hardiker and Helleso (2019:2), makes information practice socially constructed and therefore determines how information is produced, organised and disseminated.

Lloyd (2011:285-292) defines information practice as a collection of information-related activities (actions, doings) and inherent competencies, sanctioned and mediated socially and materially with a view to creating negotiated understanding about the ways of knowing and performing in a collective practice. By this definition, Lloyd (2011:285-292) appears to agree with Sundin and Johannisson (2005:112), and Johannisson and Sundin (2007:200) on the ground that information practice constitutes institutionalised activity consisting of, among other things, a formal set of rules, structures and what is considered ‘proper’ information seeking among people in a social context they are participants of. According to Lloyd *et al.* (2013:127), information practice is reflected and constituted by the “heritage” activities, norms, and conditions of the setting, and the ways to know are authorised and sanctioned as elements of, and are relevant to, the cultural practices of a specific setting. They emphasise that information practice is not a range of routine actions, but rather, an on-going range of activities that are facilitated or restricted by the information landscapes within the social site. It therefore means that the information landscape sanctions the valued and accepted information to facilitate learning or knowing in a specific setting or context. This presupposes that Lloyd’s (2011:285-292) perspective of information practice holds the assumption that knowledge is a social artefact that is revealed in the ‘sayings’ and ‘doings’ of the social site such as information landscape. This in turn appears to suggest that the seeking, sharing and use of information to be conversant with the practices of an information landscape would constitute information practice. This includes seeking, sharing, and using information during the performance of a task (Choo 2007). In this case, it could be understood that the asking of questions to gain insight to complete a task could constitute information practice. This relates well with McKenzie’s (2002:38-41; 2003:26-27)

understanding of information practice, especially in areas of active seeking and scanning to meet an information need to learn a practice.

The discussion until now has examined what constitutes information practice as it relates to either the activities involved in the management or treatment of information in a context, or that which enables learning in a specific context. In this study, information practice is conceptualised as those social and material activities that enable learning or knowing in an information landscape. This includes sanctioned activities participants of a site engage in to learn or know the practices of that site. It also includes the seeking, sharing and use of information that enables others to learn the practices of the information landscape. Lloyd (2011:281) and Pilerot (2016:414) both acknowledge such conceptualisation of information practice as an enabling way to investigate information literacy, where information literacy is understood as information practice in an information landscape.

Conceptualising information practice as that which enables knowing (learning) in an information landscape highlights the issue of affordance. Lloyd (2010b:168) suggests affordance enables a way of knowing what constitutes an information landscape. The concept of affordance is described in the next section.

2.5.1 Affordance

Affordance is described as the opportunity a setting provides (Gibson 1979a; Gibson 1979b:27). In the workplace, affordance is described as the opportunity provided to people to engage in the workplace activities and interactions that are central and valuable (Billett, Barker & Hernon-Tinning 2004:233; Lloyd 2005:233). Billett (2001d:209; 2002:29-30) and Lloyd (2006a:572) suggest that in a workplace landscape, affordance facilitates knowing and learning among people who work in that space. According to Billett (2002:35-36), affordance is provided through work practices and activities such as direct and indirect guidance (e.g. interacting with colleagues, listening and observing in the workplace). He suggests that the affordance provided through the practices of the information landscape shapes the intentional and unintentional learning activities such as the direct guidance provided by experts at the workplace.

In the context of knowing, affordance refers to the perception and meaning derived from activities, artefacts (objects) and symbols that characterise an information landscape (Gibson 1979b; Lloyd 2010b:168-169; Maapalo & Østern 2018:384). This implies that affordance provides access to information (Billett 2002:31; Lloyd 2010b:169). With this in mind and relation to information literacy, Lloyd (2005:232-234) suggests that becoming information literate in an information landscape is reliant on the affordance the information landscape offers. This also suggests that affordance connotes access to information modalities or sources available to people in an information landscape (Gibson 1979b; Lloyd 2010b:168-169). According to Lloyd (2010b:169), like information, affordance can be classified as epistemic (textual), social or corporeal. She defines epistemic (textual) affordance as the knowing opportunity that the information landscape provides about the engagement with codified knowledge. She explains social affordance as the knowing opportunity that the information landscape provides in interaction and co-participation among members as they negotiate an understanding of the practice of the information landscape. According to Lloyd (2010b:169), social affordance provides nuanced and implicit information that reflects the shared values and norms of the members of an information landscape. Corporeal affordance manifests through the engagement with activities, symbols and tools of the practice. She explains that corporeal affordance furnishes members the opportunity to develop and connect with embodied information to develop 'know-how' knowledge. The above classifications support the conception that affordance is an information experience in the landscape through which formal, informal or incidental learning takes place. She further explains that formal, informal or incidental information experiences draw individuals into membership through reflective and reflexive practice (Lloyd 2010b:169-170).

2.6 ASSUMPTIONS OF THE SOCIO-CULTURAL PERSPECTIVE TO INFORMATION LITERACY

Following the discussion on the socio-cultural perspective, the following are established:

- On the assumption that all learning is contextual and situated in different practices, information literacy becomes an issue of learning and communication in a specific practice (Papen 2013; Pilerot 2016:418).
- Information literacy is a ‘culturally-shaped’ practice, one that reflects the nature of interactions among people who co-participate in a shared endeavour (Lloyd 2010b:144).
- Information literacy shifts the focus from individualised-agency phenomenon and generic skills to how people learn to act knowledgeably and acceptably in situated and social practices in a specific setting, pertaining to specific information practice (Tuominen, Savolainen & Talja 2005:340; Lloyd 2010b:29; Lloyd & Wilkinson 2016:337; Hicks 2018a:22; Hicks 2019:1191).
- Information literacy enables one to know what an information landscape encompasses; to develop the inherent knowledge of said information landscape and be able to practically apply that knowledge (Lloyd 2006a:578; Lloyd 2012:772; Lloyd *et al.* 2013:123; Lloyd 2017:93; Hicks 2018a:22; Lloyd & Wilkinson 2019:253).
- Information literacy relates not only to the text but also to the social interaction; and the corporeal, involving physical actions, with recourse to material objects in an information landscape (Lloyd 2012:776).
- Information literacy involves the “whole person” – one that emphasises that information acquired through interactions among people and bodily experiences of a practice are critical to learning (Lloyd & Somerville 2006:188; Lloyd 2006b:580; Lloyd 2012:776).
- Information literacy is a holistic process involving the entire body – being occupied in, and interacting with, the information landscape, and facilitating “knowing” about a work-life or professional practice (Csordas 1994:6; Lloyd 2006b:571; Lloyd 2009:398).
- Becoming information literate requires an engagement with all the sources or forms of information valued within an information landscape and understanding the paths and nodes that characterise the information landscape (Lloyd 2010b:2).

- In the workplace landscape, information literacy is understood in terms of competence. This involves the relationship between experts and novices in a community of practice with recourse to knowing (learning) and performing in the practice (Lloyd & Somerville 2006:195; Lloyd 2006b:571; Lloyd 2010b).
- In the workplace landscape, information literacy is shaped by cultural elements such as the values, rituals, beliefs and conventions that prefigure the practices (Lloyd 2010b:144).
- In the workplace landscape, information literacy goes beyond the development of behavioural skills and cognitive processes in an individual (Lloyd 2010b:144).
- The sanctioned practices, *sayings* and *doings* enable information use, and through information use, one comes to *know*; thus, becoming information literate (Lloyd 2010b:2).
- By drawing meaning from interactions, practices, processes and experiences involving information (in whatever form or modality) in a specific information landscape, one *knows* or becomes information literate.
- Becoming information literate in a landscape is influenced by the socio-cultural, historical and political interests that construct, structure and shape the context pertaining to the discourses, practices and affordance of the information landscape (Lloyd 2010b:159,169).

The above assumptions of the socio-cultural perspective emphasise the importance of context. The assumptions also emphasise the ideological perspective of literacy that relates to social practices of the context of an information landscape. That is, *knowing*, which is underpinned by access to information happens through interaction and participation in social practices in the workplace landscape. Again, the assumptions suggest that through interaction and participation in work practices a person becomes information literate in the workplace landscape. The assumptions acknowledge the role of the body, material objects and people in knowing or becoming information literate in different workplace landscapes.

2.7 REFLECTION AND APPRAISAL OF THE CHAPTER

As stated earlier, one of the limitations of this chapter is that it does not discuss all the numerous definitions of the concept of information literacy. Having said this, the strength of this chapter emanates from the discussion it presents on the key terms within which the concept of information literacy is understood and interpreted. The meanings of these key terms have implications for the interpretation of the concept of information literacy.

From the understanding of how the terms ‘literacy’ ‘information’ and ‘learning’ are understood, it is evident from the literature that the definitions for the concept of information literacy can be broadly classified into either the autonomous or the socio-cultural (ideological) perspective. From the background of the autonomous meaning of the term ‘literacy’, information literacy is understood as the ability to search and use information in a general sense. The autonomous perspective places the focus on the individual concerning his or her ability to access and critically evaluate and use information for effective study and solve problems, as in the definitions of ALA (1989), Behrens (1994), Doyle (1992; 1994), Shapiro and Hughes (1996:3), ACRL (2016) and CILIP (2018). The autonomous perspective relates the term ‘information literacy’ to the cognition and ability of a person to acquire knowledge and exhibit critical-thinking, reading, writing, computing, library and research skills for lifelong learning and decision-making as it is mostly with the academic setting. The autonomous perspective relates learning to the cognitivist perspective which means a change in the individual mind through the acquisition and procession of information formally and informally.

From the socio-cultural (ideological) understanding of the term ‘literacy’, information literacy is understood as seeking and use of usually social and corporeal information to develop the know-how in relation to what people do in a socio-cultural context of a specific community of practice. The socio-cultural perspective focuses on knowledgeable practices within a community of practice as in the definitions of Lloyd (2006a) and Bruce, Hughes and Somerville’s (2012). The ideological perspective conceptualises information literacy from the socio-cultural context of the social practice where learning is perceived as a socio-cognitive activity where relevant skills and knowledge are gained in a community or workplace. Since information literacy is about learning, Grafstein’s (2002:202) argument out that it makes less sense for one to claim to be literate in

general, rather than being literate about something is worth noting as it underpins the assumption of the socio-cultural perspective in this study.

2.8 SUMMARY OF THE CHAPTER

The chapter gives background information about the concept of information literacy and the various definitions that have ensued. The critical conceptual features of the concept of information literacy are discussed with much focus on the socio-cultural perspective as the point of departure. Specifically, Lloyd's (2006a) socio-cultural definition for information literacy as an information practice was discussed. Key concepts of Lloyd's definition were discussed concerning how they apply to this study. In this regard, concepts such as knowing, information landscape, information practice and affordance were discussed from the socio-cultural and practice perspective.

Assumptions of the socio-cultural perspective to information literacy were discussed. The discussion provided a clear understanding of how situated and contextual information literacy is in different practices or settings. The 'whole person' and the bodily experiences of practice are emphasised as important in making a person information literate in a setting. It was noted that engagement with the sanctioned modalities of a setting enacts information literacy in that setting. Following this, Lloyd's (2012:776) point that information literacy is not only textual, and that it relates also to social interaction; and the corporeal, involving physical actions, with recourse to material objects in an information landscape was noted and explained as the means by which to know or become competent about work practices.

In the following chapter, it is important to provide a critical review of the literature to appreciate how information literacy is enacted in workplace landscapes.

CHAPTER 3: INFORMATION LITERACY AND THE WORKPLACE LANDSCAPE

3.1 INTRODUCTION

The workplace landscape is characterised by different elements, namely, people, material objects and various work practices (activities). These elements are crucial in the process of becoming information literate in the workplace. This chapter presents a review of information literacy in the workplace landscape. The conceptual features and assumptions of the socio-cultural perspective to information literacy in the workplace form the basis of this review.

In the workplace landscape, experiential knowledge and expertise are the focal points. Hence, information literacy becomes manifested in the reality and reflexivity of practice (Lloyd 2010a:252). Researchers such as Tuominen, Savolainen and Talja (2005), Lloyd and Somerville (2006), Lloyd (2007; 2009), Harris (2008) and Moring (2011) suggest that information literacy manifests as a complex information practice that is plaited through the net of practices that constitute and shape a specific site or workplace. This means that information literacy is viewed as contextualised practice inherent in the processes and activities prefigured on the socio-cultural, historical, political and economic dimensions of becoming informed of the social field (Lloyd 2010a:252-253). It is understood here that to be information literate or competent requires being in the workplace landscape and understanding how the practices of the workplace are enacted through the interconnections of knowledge, material objects and the people of that workplace landscape (Lloyd 2010a:252-253). Practitioners draw on information and affordance to construct practical knowledge ('know-how') from the practices of the workplace (Lloyd 2010a:252-253). This presupposes that to be information literate or to be competent in a specific information landscape, a person must engage in the practices of that specific information landscape, in other words, the person must be exposed to the processes and activities of that information landscape (Filstad 2004; Lloyd 2010a:252-253).

3.2 CONTEXTS OF THE WORKPLACE LANDSCAPE

The practices and material objects situated in a workplace define its context and distinguish it from other workplace contexts. Robinson and Baum (2020:180) suggest that material objects of craft trades fundamentally speak to what happens in the context even when nothing is happening momentarily. The context sets the scene within which knowing takes place and the knowledge required at that specific workplace. As contexts of workplace landscapes are different, to understand how learning and information literacy takes place in different workplace landscapes, the sections below describe some contexts of workplace landscapes. These contexts are emergency, health, culinary and craft-making workplace landscapes.

3.2.1 Emergency workers

The context of the emergency service landscape is such that the practitioners respond to calls to attend to emergencies. The emergency service workers include firefighters and ambulance officers (paramedics).

3.2.1.1 Firefighters

The firefighting context relates to combating and quenching fires that pose a threat to humans, animals and property, alike (Morman, Schrodt & Adamson 2020:1094). Bogucki and Rabinowitz (2005), and Ishak and Williams (2017:337) state that firefighters engage in the following practices: alarming, entry, suppressing, overhauling and terminating. Hong and Samo (2007:314) explain these terms:

- Alarming, is when firefighters put on self-contained breathing apparatus and personal protective equipment, such as a helmet and bunker gear, before entry into, or when en route to fires.
- Entry activities involve breaking into the burning structure to douse the fire in order to rescue life and property.
- Suppressing encompasses the activities carried out to vent and extinguish the fire.

- Overhauling means opening walls or pulling down ceilings to extinguish the fire completely.
- Terminating is the recovering or repacking of tools used in firefighting.

Firefighters also investigate to establish the origin of the fire and its causes. Firefighting practices require the use of material objects such as fire engines, ladders, fire extinguishers, bunker gear, fire hydrants, fire pumps, breathing devices, fire hoses, safety boots, gloves, gas detectors, hydraulic cutters, axes, helmets, water and foam (Harrison & Olofsson 2016:159; Park, Kakar, Pei, Tome & Stull 2019:104). These material objects form crucial parts of the physical make-up and identity of firefighters (Harrison & Olofsson 2016:171).

3.2.1.2 Ambulance officers (paramedics)

The context of ambulance officers relates to the provision of first-aid care to people with medical emergencies (life-threatening illnesses or injuries) outside a medical facility (Avraham, Goldblatt & Yafe 2014:194; Corman 2017:601). Ambulance service officers provide first-aid care during or before transporting the patient to the appropriate medical facility. The practices in this workplace landscape include performing patients assessment, defining conditions, providing cardiac support (when there is heart failure), medication administration (if necessary), bandaging wounds, stabilising broken bones, and neck and head injuries (Corman 2017; Goyal, Sciammarella, Cusick & Patel 2019; So, Cheung, Liu, Tang, Tsoi & Wu 2020:1). The material objects ambulance officers use include but are not limited to pneumatic vests and band chest compression devices (mechanical chest compressor), transport vans, bandages, hard cervical collars, ventilators, limb splints, defibrillators, head blocks, obstetrical kits, thermometers and first aid drugs (American Academy of Pediatrics 2014:93-94).

3.2.2 Hospital-nurses

The context of the hospital workplace landscape is such that the practitioners (nurses, doctors, pharmacists) collaborate to get work done (i.e. treat patients) (Bonner & Lloyd 2011:1214-1213).

The workplace landscape of nurses includes working in shifts to take care of the sick, injured, disabled, and dying (Buhler-Wilkerson & D'Antonio 2020). They also advocate, educate and provide medical help to families and communities (Kitson, Marshall, Bassett & Zeitz 2012; Buhler-Wilkerson & D'Antonio 2020). Like doctors, nurses may specialise in an area of the medical profession (e.g. mental health, paediatric nursing). Nursing practice enacts the following practices: observing and recording patients' behaviour or health history, assessing patients' condition through physical examination and diagnostic tests (e.g. taking and reading patients' temperature), administering medication and injections (if allowed), treating wounds, assisting doctors to perform surgery, educate and counsel patients (Career Builder 2018; Asmirajanti, Hamid & Hariyati 2019). The material objects used in the nursing workplace landscape include stethoscopes, thermometers, watches, blood pressure cuffs, syringes, ventilators, feeding tubes, scissors, otoscopes, catheters, glucose meters, obstetrical forceps, hand sanitisers, medicines, record systems (files or computers), and personal protective equipment such as gloves and masks (Royal College of Nursing 2018:16).

3.2.3 Culinary

The culinary workplace landscape relates to chefs. The context of the chefs' workplace landscape is such that they work in kitchens of hotels and restaurants (Wellton, Jonsson & Svingstedt 2019:402-403; Kilichan, Calhan & Umur 2020:193). The practices within the chefs' workplace vary and depend on the kind of food that is prepared or served. These include the sorting and cutting of foodstuffs, cooking (boiling, steaming toasting, roasting, frying), tasting, washing and cleaning utensils (Ma, Shive, Zhang, Aquilante, Tan, Zhao, Solomon, Zhu, Toubbeh, Colby, Mallya & Zeng 2014:641; Wellton, Jonsson & Svingstedt 2019:405). Ma *et al.* (2014:641), Wellton, Jonsson and Svingstedt (2019:411), and Robinson and Baum (2020:167) state that the material objects of the chefs' workplace include cooking utensils, foodstuffs (e.g. fruits, vegetables), salt, tableware, refrigerators, menus, cookbooks, cooking machines, knives. The use of these material objects is dependent on the type of food being prepared.

3.2.4 Craft-making/Artisans

The contexts of the craft workplace landscapes are such that the practitioners of the craft landscape first conceive an object and its purpose, and then design and make the tangible object that is meaningful. Practising a craft involves following logical steps, techniques and the rules of the craft context (Veeber, Syrjäläinen & Lind 2015:24).

Crafts are hands-on manual activities that require creativity, innovativeness and problem-solving skills to create an artefact (Sennett 2008; Rönkkö & Lepistö 2016:48). The crafted artefacts have individual or cultural meaning and are used to express life situations, special experiences, and ethnic, political or gender identities (Kojonkoski-Rännäli 1995; Grimes & Milgram 2000; Rönkkö 2011; Kouhia 2012; Väänänen & Pöllänen 2020:270). Craftspeople may design and make artefacts based on their clients' wishes (Chapaev, Efanov, Bychkova, Dorozhkin & Akimova 2019).

The craft-making workplace is mostly micro-work with not many workers as compared to other classical workplaces (Chapaev *et al.* 2018; 2019). The craft-making workplace constitutes people who are bound together at one location by their commitment to a certain craft (e.g. in a workshop or a salon) (Ludlow 2020:12). The craft workplace could be a home-based-workspace among family (Bose 2018:4). The craft-making work is most often than not managed by the owner who is most often than not a master of the craft (Chapaev *et al.* 2019). Most often, novice crafters (apprentices) are ranked, according to their abilities, in the workplace (Gowlland 2012:364; Holmes 2015). Novices wear a uniform in some craft workplaces (Essah 2008; Agyemang & Boateng 2019:109). In the workplace, practitioners often use traditional handicraft techniques to make products or artefacts (Vanderploeg & Lee 2019:52).

Craft making is a whole-person dialogue that involves the senses, feelings, intuition and thoughts of the craftsperson (Nasseri & Wilson 2017:197; Kokko & Räisänen 2019:29). Thus, craft making is an embodied practice that unfolds through the “intimate connection between the hand and head (mind)” (Sennett 2008:9; Atkinson 2013). Craft making is practical as it entails the application of bodily skills, trained sensory capabilities and technical know-how when using tools and materials (raw), as well as stylistic techniques and preferences (Crawford 2009;

Williams 2010:247-248; Vannini & Vannini 2019:1-2). Examples of craft-making workplace landscapes include hairdressing, needlework, woodwork, metalwork, clay work and weaving. These workplace contexts are discussed below.

3.2.4.1 Hairdressing

The hairdressing context focuses on cosmetising and beautifying clients' hair to enhance their appearance (Holmes 2015:485; CareerExplorer 2020). Hairdressers work in a salon in every public space, from high streets to shopping malls (Shortt & Warren 2012:18). The practices in the hairdressers' workplace landscape include cutting hair, dyeing (colouring) hair, combing hair, washing hair, blow-drying hair, perming, braiding, curling and wig styling (Pallidino 1984; Chen, Chang & Chen 2010:98; Holmes 2015:486; Liljedahl, Wahlberg, Liden, Albin & Broberg 2019:46; Waersted, Enquist & Veiersted 2019; CareerExplorer 2020). The material objects of hairdressers' workplace include the following: scissors, chemicals, gloves, soap, mirrors, blow dryers, hair cosmetics (e.g. creams, dye) (Goebela, Diepgenb, Blömekec, Gasparid, Schnuche, Fuchsf, Schlotmann, Krastevah & Kimberi 2018:124; Liljedahl *et al.* 2019:46; Waersted, Enquist & Veiersted 2019).

3.2.4.2 Needlework

The needlework environment is characterised by the sewing trade of making and repairing clothes. The practitioners who work in the needlework landscape are called tailors (both male and female). The practices in this workplace include measurement taking, sewing, buttoning, and ironing, fitting and cutting (Lave & Wenger 1991:71-72; Bakker-Edoh 2018:25; Vincent 2018:120-122). The material objects found in this workplace include sewing machines, tape measures, needles, large tables, ironing boards, thimbles, notebooks, chalk, pencils, rulers, irons, threads, buttons, safety pins, scissors, a fabric made from cotton, wool, linen or silk (Nagori 2017; Vincent 2018:106).

3.2.4.3 Woodwork

Woodworkers are craftspeople or artisans (e.g. carpenters and woodcarvers) who make artefacts from wood. These artefacts could be cabinets, furniture, pianos, hunting equipment, boats or figurines (Wege 2011; Barty 2017; Maapalo & Østern 2018:384). The practices in the woodwork landscape include wood cutting, wood seasoning, shaping, nailing, sawing, measuring, polishing, lacquering, and finishing (Ranganathan 2018:644). The tools used in the woodwork include chisels, hammers, knives, saws, axes, gouges, planers, sanders, nails, tape measures and power drills (Porter 2001; Wege 2011:18; Adu-Agyem, Sabutey & Mensah 2013:167-169). Woodcrafters use different types of wood such as maple, mahogany, cedar, oak, butternut, fir and black walnut (Porter 2001; Wege 2011:18).

3.2.4.4 Metalwork

Metalworkers are craftspeople (e.g. goldsmiths, car restorers, blacksmiths, and bladesmiths) who skilfully make or repair objects from metals. Such objects include iron gates, jewellery, cooking utensils and agricultural tools. The tools used in metalwork include anvils, hammers, chisels, tongs, and fullers, hardy and slack tubs (Stahl 2015:56). The raw metals (materials) that are used in metalwork include copper, brass iron, bronze, silver, lead, gold, and brass (Asderaki-Tzoumerkioti, Rehren, Skafida, Vaxevanopoulos & Connolly 2017:180; Martín-Torres, Arenas, Veronesi & White 2018:147; Mayberger 2020:68). Depending on the kind of metalwork, the practices include: forging, cutting, filing, sawing, welding, heating, solidifying, hammering, embossing and quenching metals (Stahl 2015; Barron 2018:241-242; Insley, Maskrey, Hallett, Reid, Hynds, Winter & Panko 2019:410-412).

3.2.4.5 Clay work

Clay workers are craftspeople (e.g. potters, ceramists, mud masons) who make artefacts out of clay. The artefacts made out of clay include urns, tiles, vases, wares, water jugs, storage jars, cooking utensils and figurines. The tools and materials of clay workers include buckets, water, clay, wheels, raw wood, and kiln (Gowlland 2012; Groth, Mäkelä & Seitamaa-Hakkarainen 2013; Hunt 2016:245; Groth 2017:123; Nasseri & Wilson 2017:197; Balachandran 2019:2;

Batmaz 2019:38; Roberts, Hagopian, Ahlstrom & Sakai 2019; Klekot 2020:220). The practices of clay work include but are not limited to, flooring, shaping, casting, throwing, trimming, moulding, burnishing, carving, heating (firing) and drying, depending on the type of clay work (Batmaz 2019:45-48; Dyer, Stamper & Josephs 2019:19; Roberts *et al.* 2019:375-376; Klekot 2020:216).

3.2.4.6 Weaving

The weaving context is characterised by the action of interlacing yarns to produce a fabric (Temesgen 2019:4; Lexico 2022b). It involves knotting lengthwise (vertical) yarns and crosswise (horizontal) yarns at a perpendicular angle to produce a fabric (Adanur 2001:1; Temesgen 2019:4). Temesgen explains that the lengthwise yarns are called the warp, whereas the crosswise yarns are the weft (Temesgen 2019:4). The practices of the weaving context include warp preparation (warping), weft preparation (winding yarns on the bobbin), picking, reeding, shedding, beating up; heddling and tying up (Fiadzo 2010:16; Adom 2016; Amissah & Afram 2018:101; Temesgen 2019:1, 4). Material objects include a loom, shuttle, yarns, treadle, reed; bobbin, pulley and swordstick (Amissah & Afram 2018:106). The weaving workplace is discussed in more detail in Chapter 5.

The discussion in the context of workplace landscapes attests to the fact that the contexts of workplaces differ. Most of the practices are core and unique to their respective workplace contexts. As shown in the examples (see 3.2.4.1 to 3.2.4.6), workplace landscapes are unique, in that a hairdresser would in all likelihood not practice in a firefighting or clay-work landscape. Therefore, the practices of the workplace landscape determine the kind of material objects sanctioned at that workplace

3.3 COMPETENCE IN THE WORKPLACE LANDSCAPE

As discussed in section 2.3.3, *knowing* (knowledge), which relates to competence, is understood to be residing in social relations sanctioned by the people in the community through the inter-subjective practice of the workplace landscape (Lave & Wenger 1991; Billett 1996; Lloyd 2005:231; Tanggaard 2006; Harris 2008; Lloyd 2012:774). To be competent (knowledgeable), a person has to learn from the workplace landscape. This kind of learning is not a mere acquisition of information or skills; it is a means of qualifying a person to become competent within a specific workplace context and enabling that person to become familiar with the “regime of competence” of a community (Wenger 2010:180). In a community of practice, competence is locally negotiated (Moring & Lloyd 2013:7). For Wenger (2010:180), competence includes:

- Understanding what matters in what a community (workplace landscape) does and how what it does gives rise to a perspective on the world.
- Being able (and allowed) to engage productively with others in the community.
- Using the range of resources that the community has accumulated through its history of learning.

To be competent, people need to meet the requirements (conditions) for the competence in the workplace landscape. Relating this to the discussion on contexts of the aforementioned workplace landscapes (craft, emergency, nursing and culinary) suggests that to be identified as competent in these workplace landscapes, people must meet the following conditions (requirements):

- Know the protocols, norms and values of the workplace or profession.
- Know how to perform the situated practices of that workplace or profession in the accepted manner.
- Know how to use the material objects (i.e. tools and materials) in an accepted way.

The craft workplace is described as the epicentre of craft life (Sennett 2008:61). Hence, the master craftspeople are not the carriers of the knowledge of the craft as some researchers have

suggested (Chapaev *et al.* 2019; Turna 2019:688-689). Rather, they emerge and grow from learning and participating in the craft practices (Nasseri & Wilson 2017:197; Amrani, Saka, Matta & Chahdi 2019:46). According to Yliveronen and Seitamaa-Hakkarainen (2016:2), craft knowledge (competence) represents ‘know-how’, ‘know-why’ and ‘know-that’ knowledge. In other words, craft competence is not just a series of operations; they represent ‘know-how’ knowledge combined with thinking: the craft maker has to know what to do, how to do it, and why. Relating this to the context of the craft workplace, to be considered a competent practitioner in the craft-making workplace, people must, in addition to the conditions stated above:

- Be creative and analytical
- Know and understand the cultural meaning of artefacts
- Know the secrets of the craft.

Ludlow (2020:10) suggests that if people want to be known as masters of a craft, they must prove it through their accomplished practice of the relevant craft. In other words, their competence (knowledge) should be evidential. This alludes to the practicality of competence. Patchet (2017:33) suggests that being competent in craft making relates to the development of broader capability in terms of tools and materials usage as well as compared to other practitioners.

Craft practice entails embodied knowledge that is accessed through continued practice (Nasseri & Wilson 2017:195-196). It involves dialogue between the body, mind and the environment to have a conceptual and perceptual knowledge of it (Nasseri & Wilson 2017:194). Torell and Ranglin (2014:26) suggest that good judgment, feelings and bodily skills are prerequisites to competence in the craft.

From the discussion, the pressing question is how is becoming competent (a knowledgeable practitioner) in the workplace landscape (i.e. knowing the workplace landscape) enabled by information literacy? The ensuing sections examine this.

3.4 KNOWING THE WORKPLACE LANDSCAPE

As discussed in section 2.3.3, *knowing* relates to learning to meet the requirements for the competence of the workplace. To be able to meet the requirements for the competence of the workplace, individuals have to access and use the information that is crucial in making individuals *know* the workplace. Individuals need to draw on the information and knowing affordance of the workplace to develop competence (i.e. becoming information literate). This information and knowing affordance is drawn on through training either by both formal learning (classroom) and workplace combined or just at workplace through apprenticeship depending on the formality of the practice of the workplace landscape. These are discussed subsequently:

3.4.1 Formal learning (classroom training)

Classroom training takes the form of a formal learning approach where learning is structured. Novices in professions like for example, firefighting, ambulance officers (paramedics), and sewing, culinary, selling, nursing, and hairdressing are given classroom instructions. This training takes place in either training colleges, or at work-based training centres (Tracey, David, Dan, Alan, Alison, Nick & Lorna 2005:6; Lin & Bound 2011:35; Moring 2011; Fafeita & Lloyd 2012; Lahti 2012:179; Stierand 2015; Holmgren 2016:250-251; Castro, Andres & Prestoza 2018:48; Nordsteien & Byström 2018:831; Dixon 2019:58; Juul & Byskov 2019; Wellton, Jonsson & Svingstedt 2019:415). Nurses and chefs are given classroom instructions in training colleges or universities. However, a recent study suggests nurses can also receive classroom instruction at the workplaces' (hospitals) training centres (Nordsteien & Byström 2018).

In the classroom, novices in firefighting, nursing and ambulance services are provided with training manuals (safety bulletins and textbooks), and are taught standing orders, protocols, values and norms of the professional practice (Lloyd & Somerville 2006:189-190; Lloyd 2009:399; Moring 2011:3-4; Nordsteien & Byström 2018). The training manuals (textbook and safety bulletins) provide novices with the conceptual knowledge (i.e. 'know-that', or 'know-why' knowledge) to learn about the propositions, facts, and concepts of the practices and events related to the workplace (Blackler 1995:1023; Billett 2001d:xiv; Lloyd & Somerville 2006:189;

Lloyd 2009:399; Nordsteien & Byström 2018). For example, Nordsteien and Byström explain that novice nurses are given conceptual knowledge on infection control, illness handling, documentation, health ethics, and teamwork as well as communication skills (Nordsteien & Byström 2018:831). Pallidino (1984:2-3) and Tracey *et al.* (2005:7) suggest that novice hairdressers are taught conceptual knowledge of hairdressing, communication skills, and hygiene during classroom instructions.

The training manuals (safety bulletins and textbooks) provided to novices attest that the conceptual knowledge is of social and textual sources of information (Lloyd 2009:399). This suggests that the classroom environment and its training materials provide novices with both textual and social affordance (information) to develop their competencies to act as practitioners (Lloyd & Somerville 2006:189-190; Lloyd 2009:399). That is, novices become information literate textually. However, aside from the social and textual affordance of information provided in the classroom, there is limited corporeal information provided through hands-on practical training. For example, Lloyd (2009:399), Hader (2012:6), Nordsteien and Byström (2018:831) suggest that in the nursing and ambulance officers' workplaces, novices experience corporeal affordance of information to learn through novices' use of other novices' bodies and the use of simulation exercises to enact various clinical disorders such as cardiac arrest. The information affordance (social, textual and corporeal) provided through training manuals, other novices' bodies and simulation exercises facilitates the novices' information literacy or *knowing* of the professional practice.

Depending on the profession and the formality, novices are assessed after completing the classroom instructions. The necessary authorities or councils assess novice nurses and ambulance officers institutionally, nationally or internationally (Lloyd 2009:399-401; Moring 2011:4; Vera 2020). For example, after classroom instruction, novice nurses are assessed for their nursing licenses by either an international or national nursing or midwifery council (McGillis, Lalonde, Kashin, Yoo & Moran 2018:13-14; Vera 2020).

Studies also show that a craft can be formally learnt in a classroom following a specialised school curriculum, or at the workplace (Gowlland 2012:362; Lepistö & Lindfors 2015; Tarja

2016:1; Maapalo & Østern 2018; Kokko & Räisänen 2019:27). The curriculum comprises theoretical and hands-on courses on various crafts. Such courses include fabric printing, dyeing, and embroidery courses (Kokko & Räisänen 2019:30). In the classroom, novice craftspeople (students) participate in hands-on activities to develop motor skills, comprehension skills, design skills, decision-making skills and entrepreneurial skills (Rönkkö & Lepistö 2016:48; Tarja 2016). Lepistö and Lindfors (2015:1) suggest that in the classroom, novice craftspeople are given lessons on various raw materials, techniques, tools and equipment for the textile craft. Novices (students) are also taught to challenge the traditional practices of the craft (Rönkkö & Lepistö 2016:48). At the end of the course or programme, novices may write exams (Chapaev *et al.* 2019).

3.4.2 Interaction and participation in the workplace

Workplace learning research conducted from a socio-cultural perspective focuses on the ongoing individuals' interactions and participation in work practices (Billett 1995; Billett 2001e; Billett 2004; Lloyd 2009; Bonner & Lloyd 2011; Isah 2012; Isah & Byström 2017; Nordsteien & Byström 2018). Workplace interaction is the means through which individuals co-construct knowledge and recognise the social setting and practices in which they are participants (Campbell 2019:5).

In the workplace, learning is mostly informal (including incidental) or non-formal, where it takes place through practice-experiential-based individuals activities (Marsick & Watkins 1990:12; Eraut 2000:12-13; European Commission 2001:32-33; Beckett & Hager 2002:115; Somerville & Abrahamsson 2003:21). Lloyd and Somerville (2006:191), argue that it is in the workplace landscape that “real learning” takes place. They explain that novices' participation in the work practices coupled with their interactions with experts affords them *knowing* opportunities. *Knowing* is enacted in the form of access to the corporeal and social affordance of information. The workplace landscape facilitates novices' transition from acting in the classroom to being competent practitioners (Lloyd & Somerville 2006:191; Lin & Bound 2011:36). This implies that individuals can never know or become competent in a practice (profession) unless they interact and participate practically in the practices of the workplace landscape.

Several studies have noted the means that enable novices of a community to *know*, and therefore become competent through interactions and participation in workplaces. Examples of such include, midwives, quartermasters, meat cutters and tailors (Lave & Wenger 1991), firefighters (Lloyd & Somerville 2006), ambulance officers (Lloyd 2009), sales assistants (Moring 2011), archaeologists (Olsson 2016a), librarians (Pilerot & Lindberg 2018), nurses (Nordsteien & Byström 2018) and hairdressers (Agyemang & Boateng 2019). These studies focus on individuals interaction in achieving a shared and common goal. They also provide an overview of how novices become competent practitioners through their encounters with the information affordance of the workplace. Novices get to *know* or develop the competence in the workplace by observing others:

- Novice chefs access corporeal information on the proper way of cutting vegetables by observing master chefs (Wellton, Jonsson & Svingstedt 2019:413).
- Novice engineers access corporeal information by observing colleagues and incidents at the workplace to develop the kind of competencies that is difficult to acquire through explanations (Billett 2010:47).
- Through observation, novice archaeologists access corporeal information on the proper way to handle the trowel to lift fragile artefacts at the workplace (Olsson 2016a:413-415).
- Novice car restorers observe to access the embodied knowledge of the expert restorer, to *know* undocumented phenomena (Lloyd & Olsson 2019).
- Novice tailors access information on complex practices such as measurement taking, fabric cutting and designing through observing master tailors and more experienced apprentices (Acquaah-Harrison 1997:41).
- Novice miners access information on safety by observing experienced miners (Somerville & Abrahamsson 2003:25).
- Novice hairdressers observe the masters' 'work-in-action' to acquire the skills of hairdressing (Tracey *et al.* 2005:7; Agyemang & Boateng 2019:117).
- Novices in crafts such as pottery observe and imitate master craftspeople 'in action' (Gowlland 2012:363; Bose 2018:46; Chapaev *et al.* 2019; Ludlow 2020:12).

Craft making involves the development of motor skills (Veeber, Syrjäläinen & Lind 2015:22; Tarja 2016:4; Yliverronen & Seitamaa-Hakkarainen 2016:2). Motor skills are abilities that require hand, fingers, wrist, toes, feet or tongue movements in performing various actions relating to specific professions (Newell 1991:214; Veeber, Syrjäläinen & Lind 2015:22). Thus, motor skills relate to body mechanics required to perform an action (Marchand 2008:264). Newell (1991:214-215) and Marchand (2008:263) argue that motor skills development is context and task specific and is developed through training at the workplace. The development is through demonstration and observation facilitated by master craftspeople in the workplace (Carroll & Bandura 1982; Newell 1991:226-227). As the novices observe the master craftsperson, they get a motor-based understanding of the action (Marchand 2008:263). According to Marchand (2008:263), motor-based understanding constitutes a ‘knowing-how’ from the body. This suggests that as the master craftsperson demonstrates, the novices acquire the relevant information. Thus, observation enables novices’ to access the master craftsperson’s embodied knowledge and the nuanced ways of *knowing* motor skills. Observation provides novices access to the corporeal information needed to imitate and thereby develop their craft practice motor skills. Like the other workplaces or professions, novice craftspeople slowly conform to the mastery of the craft (McCarthy & Pinches 2016:391, 404; Ludlow 2020:8). The novices discover ‘self-evident’ things that move them toward mastery of the craft (McCarthy & Pinches 2016:391, 404; Ludlow 2020:8).

Olsson (2016a:414) suggests that through observation at the workplace, hands-on experience that could not be offered by classroom instruction is gained. The development of competence is the result of access to work-practices-learning cues afforded through observation. The cues afforded by observing align with Buckland’s (1991:351) conceptualisation of information as knowledge. The cues therefore make a difference or change to the novices’ ‘knowing-in-practice’ (information literacy in practice).

It is interesting to note that not only novices are informed through observation; experts too could gain new insights and are made aware of any gaps in novices' learning. For example, in the study of firefighters, Lloyd and Somerville (2006) and Lloyd (2010d) observed that experts identify *knowing* gaps in the novices’ practices when asking novices to perform basic firefighting tasks. This therefore suggests that observation enabled the experts to identify the information gaps in

the novices' acquired skills that are still required to be competent in firefighting. The firefighter novices are therefore assigned to expert firefighters to fill the information gap (Lloyd 2010d).

Verbal conversation is another form of interaction that enables the co-construction of knowledge and the recognition of the situated practices (activities) of the workplace (Campbell 2019:5). Novices get to *know* through conversations (i.e. discussion, feedback, suggestions and comments) with experts at the workplace, as the following examples show:

- Through conversation, experienced archaeologists provide meaning and interpretations to archaeological finds in the fields to novice archaeologists (Olsson 2016a:413).
- Through the inter-play of giving and receiving feedback and comments from established colleagues, novice engineers and nurses get to *know* the practice of the workplace (Billett 2010:47-48).
- Through discussion, novice teachers internalised and reflect on expert teachers' comments, feedback and suggestions on alternative teaching methods to improve their competence (Jin, Li, Meirink, Want & Admiraal 2019:1).
- Novice firefighters and ambulance officers learn from the firefighting stories expert firefighters share (Lloyd & Somerville 2006; Lloyd 2009; Ishak & Williams 2017:348-350).
- Novice craftspeople such as potters receive feedback, such as well-informed judgment of performance from master craftspeople during and after the completion of a task. The feedback informs the novice of the proper way of doing a task and building on previous skills to conform to the craft (Newell 1991:232; Gibb 2005; Gowlland 2012:363; McCarthy & Pinches 2016:391; Taylor 2019:300).

Conversations at the workplace get novices informed and knowledgeable to perform work practices competently (Lloyd & Somerville 2006; Dodgson & McCall 2009; Billett 2010:47-48; Moring 2011; Gowlland 2012:363; Pilerot 2016; St. Jean, Jindal & Chan 2018; Campbell 2019; Jin *et al.* 2019:1). As novices are corrected through conversation (e.g. feedback), they access information on the acceptable way of performing the practice and thereby conform to the craft.

During conversations at the workplace, experts mediate and provide information affordance that enables novices to *know*. Experts narrate stories (information on important past incidents or accidents) and deconstruct events of work practices (e.g. explain why things are done or happen in a certain way) to drive the *knowing* or information literacy practice of novices (Somerville & Abrahamsson 2003:25-26; Lloyd & Somerville 2006:194-195; Moring 2011:12-13; Lindh 2018:326-377). This shifts novices' access to information from the textual information affordance of the classroom to the social and corporeal information affordance that represent the reality of the workplace (Lloyd & Somerville 2006:194-195; Dodgson & McCall 2009; Lloyd 2009:407; Moring 2011:12-13). This access to social and corporeal information helps to develop novices' competence to perform work practices.

In the workplace, novices ask experts 'hard questions' to get better informed and gain experience to change their status from novices to competent practitioners (Gerber 2001; Somerville & Abrahamsson 2003:25; Lin & Bound 2011:36-37; Lepistö & Lindfors 2015:3; St. Jean, Jindal & Chan 2018:290; Agyemang & Boateng 2019:117). For example, in the underground mining workplace, safety knowledge is gained through questioning experienced practitioners as well as taking their guidance (Gerber 2001; Somerville & Abrahamsson 2003:25). However, *knowing* the workplace is not always one-way traffic (i.e. experts imparting knowledge to novices). For example, in the study on chefs, Cormier-MacBurnie (2010:78), and Wellton, Jonsson and Svingstedt (2019:413) found that novice chefs contribute to master chefs' experiences of cooking. They observed that master chefs also learn when novices question and provide suggestions regarding the routines in the kitchen. Similarly, in the craft landscape, Patchet (2017:32) and Ludlow (2020:10) suggest that master craftspeople, though competent, are continually shaped by the craft practices of the landscape. For example, Gowlland (2012:364) found that potters (whether novice or master) learn continuously among themselves.

Through conducting experiments, what is otherwise referred to as 'trial and error', craft persons realise the skills to apply to each technique (both old and new) (Gibb 2005; Lepistö & Lindfors 2015:3; Kokko & Räisänen 2019:29, 39; Ludlow 2020:12). Novices develop their competencies through the 'learning-by-doing' phenomenon. This is most often because of imitation of observation. This suggests that craftspeople access information through 'trial and error' to ascertain the best way to perform a task or technique. Here, 'trial and error' becomes a way of

knowing the craft. For example, Lin and Bound (2011:36), Fafeita and Lloyd (2012:94), and Wellton, Jonsson and Svingstedt (2019:413) observed that novice chefs develop knife-cutting competence through repetitive trial and error. Through their engagement in basic chores such as chopping and peeling, novice chefs learn the correct way of cutting foodstuffs (Fafeita & Lloyd 2012:94). Also, according to James (2006), Lin and Bound (2011:36) and Fafeita and Lloyd (2012:94), by participating in work practices, novice chefs are exposed to different tasks and food preparations in the kitchen and this enables them to gain experience and understanding of the different techniques in food preparation. This suggests that novice chefs are afforded corporeal information and social information regarding the ingredients and the ‘know-how’ for preparing different kinds of foods. Access to social and corporeal information in the kitchen enables novice chefs to develop and become competent chefs in the future. Marsick and Watkins (1990:12) describe this form of learning as “incidental learning”. In addition, novices learn from the ‘accidents’ resulting from participating in practice. For example, Somerville and Abrahamsson (2003:26) found that novice miners develop safety awareness from the personal pains and injuries they suffer from mistakes and accidents. This brings to the fore the importance of *knowing* and observing work protocols.

Lepistö and Lindfors (2015:3), Patchet (2017:33), Klekot (2020:220) and Ludlow (2020:10) suggest novice craftspeople, for example, potters develop their skills by practising with and applying the practical concepts, techniques and materials in the workplace. This suggests that the work (i.e. doing) provides knowing affordance of information. Dufva (2017:129) elaborates on this notion stating: “making by hand develops not only maker’s handicraft skills but also her/his knowledge”. This suggests reciprocity in ‘doing’ at the workplace enables novice craftspeople to *know*, and therefore to eventually embody the skills of the craft (McCarthy & Pinches 2016:392). Sennett (2008:268) calls this the “rhythm of routine”. Therefore, for novices, the craft becomes inherent for them through the repetition of skills (Sennett 2008:295; Holmes 2015:482; Ludlow 2020:8). Therefore, novices are changed by the information they experience at the workplace to situate themselves among master craftspeople. Novices come to *know* and therefore become competent through what they see and assimilate in the workplace (McCarthy & Pinches 2016:392).

The discussion in this section suggests that there is a parallel route to learning practice or profession. Learning through interacting and participating in the workplace is deemed as real and as effective as via classroom instruction. The discussion on interaction and participation in the workplace corresponds with Latour's (1987) notion that people interact not only with each other at the workplace, but also with the material objects that make up the context (setting) in which they are situated. The discussion suggests that the material objects and body (senses) are crucial to understanding a craft. Therefore, to understand the complexities and information affordance of the practices, there is a need to pay attention to the material objects in the workplace (Huvila 2018; Lloyd & Olsson 2019). This premise gives rise to examining material objects in the workplace landscape in relation to information literacy, in the next section.

3.5 INFORMATION LITERACY AND MATERIAL OBJECTS IN THE WORKPLACE

Information literacy occurs through the enactment of practice requiring an active relationship with the symbolic and material objects that are embedded in the practice and the workplace (Lloyd 2010b; Huvila 2016; Olsson & Lloyd 2017b; Marchionini 2019:81). Material objects are conceptualised as non-human entities including the tools, artefacts and other physical objects such as the raw materials that the practitioners use to perform a task or produce something in the workplace landscape. According to Bruni, Gherardi and Parolin (2007:83), material objects mediate actions and activities and are ingrained in the work and ways of *knowing* the practices of workplace landscape. This suggests the dependency of information literacy on materiality. Material objects provide affordance in the development of information literacy or *knowing* in practice (Hicks 2018a:175; Hicks 2019:1195).

According to Orlikowski (2007:1437) and Gherardi (2009b:354), every material object is socially constituted and every social activity is materially constituted. The sociality of material objects forms distributed or fragmented agencies that constitute knowledge embodied in entities, photos, machines, routines and techniques through which practices are anchored (Bruni, Gherardi & Parolin 2007:87; Orlikowski 2007:1437; Gherardi 2009b:354; Pilerot & Lindberg 2018:262). In line with this notion, Malafouris (2013:149) argues that material objects such as

raw materials of workplace landscapes are not acted upon; rather they are engaged in, and interacted with, in practice.

According to Kirchhoff (2009:206) and Maapalo and Østern (2018:383), the material agency considers the details arising from human embodiment. Thus, through the lived body of humans, material objects act. From this interpretation, information literacy or *knowing* through material objects could be understood through the agency of the material objects. For example in woodwork, clay work and metalwork, materials such as raw wood, clay, as well as metal are ‘actants’ (Untracht 1969:5-6; Kuijpers 2018:865-867; Maapalo & Østern 2018:383; Klekot 2020:220). An “actant” is something to which activity is granted by others or that which acts (Latour 1996:7). According to Kuijpers (2018:865-867), Maapalo and Østern (2018:383-384), and Klekot (2020:220), metal, wood and clay (all materials) in metalwork, woodwork and clay work, respectively, have agency and therefore ‘behave’, act and interact in the various practices of the workplace landscape. This follows that different materials afford different learning opportunities in different workplace landscapes (Maapalo & Østern 2018:384). For example:

- Depending on the density or humidity, raw wood (material) provides information affordance such as “hard resistance” to the extent that the woodwork craftspeople need to use metal tools to work with (Maapalo & Østern 2018:383-384).
- Raw metals (material) act in a certain manner and are therefore perceptible to metalwork craftspeople in practice (Untracht 1969:5-6; Bray & Pollard 2012; Kuijpers 2018:865-867). In a study involving car restorers, Olsson and Lloyd (2017a), and Lloyd and Olsson (2019:7) observe that aluminum acts differently from steel when shaping.
- Shaping a vessel in clay work (i.e. pottery) requires interaction with the clay and wheel (Klekot 2020:220).

In another study, Billett (2010:48-49) found that artefacts (material objects) play an important role in the sharing of information and the structuring of work by mediating group *knowing* about projects in progress and clients. He explains that some artefacts of practice carry information in a structured and standard way that affords or facilitates *knowing* and therefore information literacy. For example, at the hospital workplace, patients’ files include information on temperature, drug

administration, personal data, fluid intake and output of patients. The patient's file provides information about the past, immediate past and immediate future plans concerning the patient to the incoming staff takeover at every shift. The patients' files are essential in medical and nursing practice (Billett 2010:48-49). This therefore suggests that being capable of accessing and using (i.e. being able to read and understand) the textual information provided in the patients' files contributes to the information literacy activities of the hospital workplace. In engineering work practices, photographs are archived materials used as information sources in the seeking and using of information (Billett 2010:48-49). Therefore, knowing how to access or deduce information from the photographs is a contributory factor to being information literate. In the library, Pilerot and Lindberg (2018:262) found learning materials such as meeting notes, PowerPoint presentations and policy documents as material objects that help perpetuate and facilitate librarians' shared *knowing*, since they are routinely referred to and used.

However, according to Billett (2010:48-49), not all *knowing* resides in artefacts, but rather in the conversations that take place around the artefacts. He states that these conversations cannot be carried out without the artefacts, which play an indispensable role in *knowing* the practice and sharing information about the practice. For example, the conversations and the attributed meaning surrounding archaeological finds play a role in the *knowing* of novices (Olsson 2016a:413-415).

Aside from agency, materiality could also be perceived in terms of understanding the material arrangement of practice on a site (Schatzki 2012:16; Hicks 2018a:51; Hicks 2019:1195). Thus, knowing the compositional importance of material objects that highlights the interaction with people to form an integral part of social practice rather than merely being an agent in theory (Schatzki 2001:12; Schatzki 2010:132-134; Hicks 2018a:51). To *know* or become information literate requires developing competence with the material activities of the social practice (Shove, Pantzar & Watson 2012; Lloyd 2017:93). Information literacy relates to the *doing*, which constitutes using the specific tools of practice. Practices in the workplace characterise the information skills in relation to the tools people use in the context of everyday lived experiences (Lloyd 2010a; Lloyd 2010b; Lloyd 2010d; Lloyd & Olsson 2018). According to Huvila (2018:229), when tools are put to work in the workplace, procedures, norms and practices are

also implemented in terms of the tools' usage. This suggests that there are protocols and norms surrounding the use of tools and materials. Knowing these protocols and the 'know-how' of practical application will contribute to information literacy at the workplace. For example:

- Novice hairdressers must know which tool is fit for a specific purpose at a particular time; they must know which action needs to be taken and with what (Holmes 2015:489).
- Woodcarvers must know a wide variety of wood and understand the properties of various types of wood, and which type is suitable for what (Wege 2011:IV).
- Novice archaeologists must learn the proper way of handling the trowel to lift archaeological finds (Olsson 2016a:413-415).
- Novice miners are given information on the importance and the proper way of using materials such as goggles, gloves, earmuffs and dust masks at the workplace (Somerville & Abrahamsson 2003:25).

Learning about material objects relates to access to information. For this reason, to *know* a craft, novices need to access information on how to use the tools and other relevant materials relating to the practice (Lepistö & Lindfors 2015:3).

Huvila (2018:230), and Lloyd and Olsson (2019:7) suggest that the physical features of the tools of the practice afford the correct ways of usage, and in so doing shape participants' *knowing* and information literacy of the practice. The crafted artefacts of craftwork information in relation to the competence, or otherwise, of the craftsperson who designed and made the artefact. For example, Nasserri and Wilson (2017:199) observe that an artefact resulting from pottery mirrors the inspiration and acumen of the practitioner who made it. This point is corroborated by Sabutey (2009:159) who found that a specifically woven fabric could suggest whether the weaver is a novice, or otherwise. This suggests that an expert weaver can tell from examining the physical features of an artefact whether the maker is competent. However, current literature, including that of Sabutey (2009:159), and Nasserri and Wilson (2017:199) do not examine the method of determining the validity of an artefact.

The above discussion shows that material objects are important in the practice of a workplace landscape. The interaction and participation in workplace landscapes are centred on material objects concerning either their usage or creation (e.g. designing an artefact). The discussion also suggests that material objects enable information affordance (textual, social and corporeal) in the workplace landscape. That is, material objects provide cues that afford information to practitioners in a workplace landscape. The information affordance needs to be accessed and understood through the body. In other words, to make sense of the corporeal information material objects afford, the body has a role to play. Thus, material objects bring the body to the fore in *knowing* the workplace landscape, especially in the craft workplace landscape. As a corollary to this, the next section discusses the body vis-a-vis information literacy in the workplace landscape.

3.6 INFORMATION LITERACY AND THE BODY IN THE WORKPLACE

Becoming information literate or *knowing* the workplace is a holistic experience that is not only established textually but also bodily (Lloyd 2010d). Accessing social and corporeal information takes place through listening, asking questions, and information sharing through demonstration and observation (Pare & LeMaistre 2006:378; Lloyd 2009:402; Lloyd 2010d; Bonner & Lloyd 2011; Olsson 2016a; Bates 2018:243; Pilerot & Lindberg 2018:261; St. Jean, Jindal & Chan 2018:290; Agyemang & Boateng 2019:117; Lloyd & Olsson 2019:7). Accessing social and corporeal information in the workplace requires the body to make sense of the information (Lloyd 2009:402; Lloyd 2010d; Bonner & Lloyd 2011; Lloyd & Olsson 2019:7). This brings to the fore the importance of the body to the embodiment of practice.

Practice researchers such as Schatzki (1996), Wenger (1998), Reckwitz (2002) and Gherardi (2008) have acknowledged the importance of the body in the embodiment of practice. Schatzki (1996:24), says that the body is an expression of the condition of life that reflects the discourse of a social site and therefore it is vital to its understanding and intelligibility. For Schatzki (1996:24), other than regarding the body as a mere tool through which people experience life, the body is vital to the enactment of social life. Studies have suggested that there is a relationship between information literacy and the body in social life (Gherardi 2009a; Lloyd 2010a; Lloyd

2012; Lloyd 2017; Bates 2018; Hicks 2018a; Hicks 2018b; Lindh 2018; Lloyd & Olsson 2018; Lloyd & Olsson 2019). Underpinning this relationship is the fact that information sometimes makes meaning to people precisely in relation to their bodies (Keilty & Leazer 2018:468). Sobchack (2004:60) explains it as follows:

As ‘lived body’, our vision is always already ‘fleshed out’. Even at the movies our vision and hearing are informed and given meaning by our other modes of sensory access to the world: our capacity not only to see and to hear but also to touch, to smell, to taste, and always to proprioceptively feel our weight, dimension, gravity, and movement in the world.

Sobchack’s (2004:60) statement above suggests that the body plays a role in *knowing* (i.e. becoming information literate). The composition of the body as both physical elements and lived experiences, thus something humans are made up of and have, suggests social, corporeal and material encounters with information as ways of *knowing* a workplace (O’Connor 2017:7; Lloyd & Olsson 2018:2). Again, Sobchack’s (2004:60) statement, in turn, also suggests that *knowing* the workplace entails the access to information modalities including the corporeal modality which pertains to the body, the five senses (eyesight, hearing, taste, touch and smell). Visible Body (2022) suggests that through the five senses of the body, the mind interprets the accessed information:

- Nose for smell (olfaction)
- Ear for hearing (sound)
- Eye for sight (vision)
- Tongue for taste (gustation)
- Skin for touch (tactile perception).

The role of the body in *knowing* through the five senses is perceived as not just a cognitive activity, but corporeal in the construction of practice (Lloyd 2007; Gherardi 2008:521; Lloyd 2009; O’Connor 2017:4; Lindh 2018:317; Lloyd & Olsson 2018:2; Lloyd & Olsson 2019:10). Through the five senses individuals understand the corporeal and sentient experiences that are enacted and contribute to *knowing* the social settings (Gherardi 2008:521; O’Connor 2017:4; Lloyd & Olsson 2018:2). Gherardi (2008:521) has observed that it is through the five senses that

knowing and professionalism is acquired. She argues that craft trades require practitioners to exhibit aesthetic knowledge as a basis for specific competence. Aesthetic knowledge is the knowledge derived from the experiences practitioners build up in relation to the taste, look, smell, feel or sound of things in the workplace (Ewenstein & White 2007:689). Gherardi (2008:521) suggests that from the interactions and participation in the practices of the workplace, novices should be able to train their bodies (develop competencies) to have the ‘eye’, ‘nose’, ‘ear’, ‘skin’ and ‘tongue’ interpret ‘something’. It is understood from Gherardi’s (2008:521) thoughts that the senses should be trained to be able to professionally understand and interpret the afforded information of the craft.

The body generates meanings, and visual cues about activities that lead to understanding and embodied *knowing* (Goffman 1983; O’Loughlin 1998:279; St. Jean, Jindal & Chan 2018:292). Embodied knowing is defined as knowledge located within, and accessed through the body (Nagatomo 1992). Lloyd (2010d) notes that the body is not just an embodied-knowing source, but also represents a visible and situated enactment of *knowing*. Thus, underpinning every intelligence or experience is the body; and as such, the body becomes a site for information and understanding and should be considered in information literacy or *knowing* of practice (Lloyd 2010d; Hoffmann & Pfeifer 2011:32; Merleau-Ponty 2012; Cox, Griffin & Hartel 2017:402; Hedemark & Lindberg 2018:436). In addition, it is argued that the body possesses, produces and disseminates information vital to the understanding of our information experiences and *knowing* through situated practices that reflect the specific information landscapes (Rambusch & Ziemke 2005:1807; Lloyd 2010d; Veeber, Syrjäläinen & Lind 2015:24; Bates 2018:247; Hicks 2018b:78; Lloyd & Olsson 2018:2; Lloyd & Olsson 2019). For example:

- Firefighters develop ‘fire sense’ – cues from smelling fire, hearing the loudness of the fire and seeing the smoke; these ‘cues’ facilitate *knowing* the fire in the firefighting landscape (Lloyd & Somerville 2006:193).
- In the ambulance service, officers develop ‘breath sound’ – cues through interaction with patients. ‘Breath sound’ cues could not be conveyed on a piece of paper (Lloyd 2009:403), in that the officers develop skills to access patients’ breath sounds for diagnostic and decision-making purposes. The body provides cues of patients’ heartbeats or pulse. The body, through its senses, provides the participants with the information

needed to evaluate a casualty scenario and to decide whether there is a need to trigger cardiopulmonary resuscitation procedures (Lindh 2018:323).

- Nurses depend on their senses, which include touching, smelling and hearing patients for diagnostic information to ascertain the state of the patient's health (Bonner & Lloyd 2011:1219).
- Chefs touch, taste and smell food for information. For example, through touching, the texture gives information about the food, whether fresh or old, whether good or bad (Fine 1996:76; Fafeita & Lloyd 2012:95; Wellton, Jonsson & Svingstedt 2019:404). Also, Cormier-MacBurnie (2010:33-34) found that looking at and feeling the texture of flour dough being kneaded provides knowing affordance of information to tell when the dough is ready.
- Archaeologists taste and feel artefacts for texture or temperature to access information (MacGregor 1999:264). Also, the heaviness, lightness, smoothness and colour of an artefact, as experienced by the body, signify meaning (Olsson 2016a:414).
- Car restorers feel metals differently when they make panels. The feel of the metals determines the amount of pressure to apply when making panels (Lloyd & Olsson 2019:7).
- Miners sense danger when they hear specific noises or smell a specific odour. For example, a pop sound indicates the pressure of methane and a bump sound indicates collapsing pillars (Sauer 1998:137; Somerville & Abrahamsson 2003:26). In addition, the sound and feel of the drill support them in determining the presence of layers and fractures (Hill, Smelser, Signer & Miller 1993:496).
- Potters, through the senses of smell, sight, temperature, taste and hearing access corporeal information (Richards 1989:146).

Like in many workplaces such as crafts, the cues suggest that there is 'dialogue' between the human (body) and the material objects (Illum 2006:119; Lepistö & Lindfors 2015:4; Nasserri & Wilson 2017:194). The 'dialogue' develops through the senses of the body such as hearing, touching and seeing (Illum 2006:119; Hofverberg & Kronlid 2017:3). According to Nasserri and Wilson (2017:203), the meaning from craft dialogue is embodied in the interaction between material objects and the body and hence is different from that of verbal dialogue. Vannini and

Vannini (2019:2) suggest that materials interact with the body during practice. They explain as follows:

Working with materials, feeling them, watching them, listening to them, and thus paying attention to what they can teach us is revealing of what we learn in virtue of our openness to the world.

In the craft landscape, material objects, when being worked with or upon, afford information that is accessible by the body (senses):

- Woodworkers relate to the sound of the wood when being worked on (nailed into) to detect that there is a correct blow or crack (Illum 2006:119; Vannini & Vannini 2019:6). The sound is accessed (by ear) through their hearing to provide for remedial action should it be required. Craftspeople read wood by touching the wood with their hands (Maapalo & Østern 2018:388). Woodworkers (e.g. guitar makers) use their fingers to ascertain the unique qualities of the wood texture through combing (Vannini & Vannini 2019:8).
- Clay workers use their hands to feel the clay and their ears to hear the associated sound, using both these sensory experiences to determine the smoothness and how much contact and rhythmic movement is needed to complete their tasks (Groth, Mäkelä & Seitamaa-Hakkarainen 2013:8; Nasserri & Wilson 2017:201; Batmaz 2019:40).
- Metalworkers receive cues by smelling the odour of metal and seeing the colour of smoke respectively (Kuijpers 2018:866). Metalworkers recognise cues from the sound and feel of a hardened metal (for example, tin-bronze) during hammering to detect that the desired hardness has been reached to prevent cracking (Untracht 1969:246; Kuijpers 2018:871).

In dialogue with material objects and their active participation in practices, craftspeople, have access to an embodied *knowing* (Illum 2006:119).

An admission of the body as key to *knowing* and therefore becoming information literate collapses the traditional dualistic notion of mind and body agency (Lueg 2015:2705-2706; Scott & Uncles 2018:305). According to Gherardi (2009a:354), people *know* through their bodies. This

recognition of people knowing through their bodies reflects how knowledge manifests in ‘know-how’ (Reckwitz 2002:253; Hicks 2018a:50). Researchers such as Bonner and Lloyd (2011:1218-1219), and Lloyd and Olsson (2018; 2019) acknowledge that the embodiments of information literacy practice are experienced at the “moment of practice” at the workplace. Information literacy practice enables the negotiation of realities and the development of skills that facilitate knowing the information environment (Lloyd 2010d).

3.7 REFLECTION AND APPRAISAL OF THE CHAPTER

The description of the context provides an understanding of what it means to be information literate in workplace landscapes. The practices and material objects of the workplace landscapes described show that no two workplace landscapes are the same. The context differs. Since context differs, how information literacy enacts also differs in different workplace landscapes. The description of the workplace context especially the craft-making landscape was crucial to understanding how information literacy enacts in the craft landscape. To be information literate in any workplace landscape, attention has to be paid to the learning affordances offered by the practices and material objects of the workplace landscape.

Information experiences that enable knowing various workplace landscapes received attention in this chapter. Unlike studies that focus on the access and use of textual information, the literature shows that when it comes to the workplace, information literacy focuses much on the experiential knowledge and expertise (know-how) that are gained through access to the social and corporeal information by way of participation and interaction in the practices of the landscape. This is so for vocational or craft-making practices. Hence, in the craft-making landscape, information literacy cannot be reduced to textually access and use of information. The sanctioned and valued information that underpins information literacy or knowing the craft-making landscape is of either the social or corporeal modality. Becoming information literate in any practice (profession) for that matter craft work cannot be done by just reading about it. The person must interact with the practitioners of the said profession as well as participate in the practices of that profession to access the social and corporeal information to develop the expertise and competence of that workplace landscape.

The importance of the social and corporeal modalities of information to *knowing* practices and developing the competence thereof draws the body to the fore in the information literacy literature. Access to corporeal and social information by way of observation and conversation provides the affordance that enables ‘real learning’ about the practices of the workplace. The novice practitioners’ motor skills in the craft-making landscape are developed through access to the corporeal actions afforded by advanced practitioners.

3.8 SUMMARY OF THE CHAPTER

This chapter provides details on contexts of emergency, health, culinary and craft-making workplace landscapes. The context of the craft-making landscapes such as hairdressing, needlework, woodwork, metalwork, clay work and weaving were also described with a focus on the sanctioned practices and material objects in these landscapes

Concerning the workplace landscape, the literature shows that knowledge of the protocols and situated practices were deemed critical to becoming competent. To be a competent practitioner of a workplace landscape, it is essential to access the valued and sanctioned information of that specific workplace landscape. It was evident that information literacy is enacted through the relationship of the body, material objects and people in the workplace landscape. It is through participation in the situated practices that novice practitioners develop the know-how, know-that and know-why knowledge to become information literate in the workplace landscape. As people interact and participate in the workplace landscapes, they interact with material objects as well. In the same manner in which material objects afford ways of *knowing* the workplace landscape, just so material objects provide cues in the workplace landscape; these cues are most often accessed and understood through the practitioners’ bodies.

Chapter 4 discusses the conceptual framework that underpins the study. The conceptual framework provides the analytical lens from which to view this study.

CHAPTER 4: INFORMATION LITERACY PRACTICE AND SITUATED LEARNING: A CONCEPTUAL FRAMEWORK

4.1 INTRODUCTION

Chapter 4 presents the conceptual framework that underpins the research. The chapter explains how the chosen or formulated conceptual framework situates the study theoretically. The chapter explains the relevance and how the conceptual framework is going to be used in relation to the assumptions it holds.

4.2 BACKGROUND TO THE CONCEPTUAL FRAMEWORK

A theoretical or conceptual framework in research serves as the glue that holds the empirical research together and gives direction and focus to the study (Ngulube 2018:1; 2020). As such, a theoretical or conceptual framework guides and helps to explain the research (Ngulube 2020). By this preamble, the researcher is not implying that theoretical or conceptual frameworks are the same. They are both analytical tools used to guide research, and may even provide a theoretical rationale to research (Ngulube 2020), but theoretical frameworks are well developed and coherently explain a phenomenon (Vithal, Jansen & Jansen 2013:17), whereas conceptual frameworks are less developed than theories (Ngulube, Mathipa & Gumbo 2015:48). According to Ngulube (2018:1), empirical research without either a theoretical or a conceptual framework is unthinkable. This necessitates the need for a theory or conceptual framework to explain this study.

A formulated conceptual framework underpins this study. Ngulube (2020) provides five ways of formulating a conceptual framework in research:

- putting together various concepts from different theories;
- aspects of a theory;

- incorporating aspects of a theory or theories, concepts from the literature, personal experiences, knowledge of the context and models;
- integrating all the concepts from more than one theory, and
- combining concepts from the extant literature.

This study integrates concepts from more than one theory to guide and explain it. The conceptual framework is used to explain how information literacy is enacted in the Kente-weaving landscape. The focus is not just on the information skills but also on the socio-cultural context that gives meaning to the Kente-weaving landscape. This necessitated the need to move away from the behaviourist or cognitivist models to the socio-cultural model where information literacy is understood from a practice perspective.

To move away from the behaviourist or cognitivist models, the study adopts Lloyd's framework for information literacy practice as a point of departure. Lloyd (2010a:252; 2011:285-286), frames information literacy as socio-cultural information practice (dispersed practice) (hereafter referred to as information literacy practice) from Schatzki's (2000:25; 2005:471) theoretical notions of 'site' and 'practice'. Lloyd's (2010a) framework for information literacy practice provides the architecture for explaining how information literacy is enacted in a site such as the Kente-weaving landscape.

This study also leverages the power of the situated learning theory as developed by Lave and Wenger (1991). It integrates Lloyd's (2010a) framework for information literacy practice with Lave and Wenger's (1991) situated learning theory. Lave and Wenger's (1991) situated learning theory is important for understanding information practice in a site where learning is viewed as participation in a socially-situated flow of *saying* and *doing* in a community of practice (Lave & Wenger 1991:15; Sfard 1998; Isah 2012:116). Situated learning promotes a notion of knowing where the focus is on the context from which social engagements enable learning and where activities and tasks are not treated in isolation, but rather as part of the community of practice from which they garner meaning (Lave & Wenger 1991:53; Lloyd 2010b:22). Community of practice that is a key concept of the situated learning theory and important for, an understanding how information literacy practice manifests in, and constitutes a socio-cultural practice in a site

(Lloyd 2010b:20). In this study, a practice-oriented learning framework will be used as the conceptual framework for framing and analysing information literacy practice.

4.3 SCHATZKIAN THEORETICAL NOTION OF SITE AND PRACTICE

To understand Lloyd's (2010c) framework for information literacy practice, it is essential to first examine how she frames it using Schatzki's (2000:25; 2005:471) theoretical notions of 'site' and 'practice'.

4.3.1 Site

Site is perceived as a kind of context or social field through which social life is constituted (Schatzki 2000:26). Schatzki (2000:26) defines the social field as the place where the co-existence of people takes place through the performance of interwoven practices. Social life constitutes people who have come together through shared purpose, beliefs, emotions and activities that typify a given practice (Schatzki 2000:25). That is, the site is where activities take place.

The *site* constitutes "nexuses of practices and material arrangements" bundled together and which overlap to form a web of practice (Schatzki 2005:471). The *site* notion focuses on shared human activities as pivotal attributes of social life as opposed to individual cognition. At the *site*, the interaction centres on practices (Schatzki 2000:26). Lloyd (2010a:247) explains that the notion of the *site* provides a relevant consideration of the socio-cultural and therefore contextualised view of information as that which is situated, made comprehensible, and therefore means something within social life. According to Lloyd (2010a:247), the notion that information must be contextualised before it can make meaning explains the notion that knowledge is situated and manifested in the *site*.

4.3.2 Practice

Schatzki (2002:71) defines practice as a social phenomenon that constitutes “a materially mediated array of human activities centrally organised around shared practical understandings”. Schatzki’s (2002) notion of practice focuses on how social life is composed and shaped through practice. According to Lloyd (2010a:249), Schatzki (2002) understands practice from the site phenomenon where practices are seen not as an individual possession, but rather as a possession of the social site. From Schatzki’s (2002) conception of practice, Warde (2005:134) clarifies practice as constituting practical activity in the form of *doings* and *sayings*, coordinated and underpinned by understandings, procedures and participation. Warde (2005) suggests that practices are comprised of practical activities and representations that are dispersed spatially and unfold temporarily. According to Schatzki (1996:89), for an activity to be recognised as a practice, *doings* and *sayings* must form a nexus, and must take place in a ‘site of social’ location, context, but not necessarily spatial. Schatzki (1996:89; 2002:77-80; 2006:1864-1865) considers that a nexus arises when activities become linked by the following four elements:

- Practical understandings (developing the ‘know-how’) of the actions constituting the practice;
- Rules, protocols, directives, admonishments or instructions that participants in the practice observe or disregard;
- Teleological-affective structuring, which encompasses a range of ends, project, actions, possibly emotions and end-project action combinations (teleological orderings) that are acceptable or enjoined to pursue and realise;
- General understandings, for example, general understandings about the nature of work, which practitioners use or draw on in action.

According to Schatzki (2001) and Lloyd (2010a:250), practice is constituted within and through dialogic intra-group activities, and facilitates shared understanding and skills development. Practice consists of cognitive, affective and embodied dimensions (Schatzki 2002; 2005). This, according to Lloyd (2010c:249) implies that practice involves the whole person (mind and body) in the site, and participating in the social activities in line with the sanctioned protocols and

practical understanding that are co-constructed in the site. She therefore suggests that when analysing practice, the focus should be on the corporeal and social construction of the practice as well as how participants intermingle together in the site.

Schatzki (1996:98) provides a distinction between practices, namely, ‘integrative’ and ‘dispersed’. Integrative practices are the more complex and “higher-order” practices inherent and constitutive of a specific site of social life. These are practices that are core and limited to a specific site. Schatzki (1996:98) provides an example of integrative practices, cooking or farming. Relating this understanding to this study, weaving practices such as warping, heddlings and reeding as discussed in the Kente-weaving landscape (site) in Chapter 5 are integrative practices. Conversely, dispersed practices are practices that are general and non-specific and are found in many complex and “higher-order” practices (integrative practices). Dispersed practices centre on a specific action such as explaining, questioning, reporting and examining and imagining the integrative practices (Schatzki 1996:91-92; Schatzki 2002:88). Dispersed practices are not core practices of a site and are prevalent in varied areas of social life. The understanding here is that explaining is an action (dispersed practice) that is used to explicate what constitutes the integrative practices; for example, a weaving practitioner explaining (dispersed practice) what warping (integrative practice) is at the weaving site. Dispersed practices constitute *sayings* and *doings* that allow for an understanding of the integrative practices in line with the protocols governing the performance of the integrative practices (Schatzki 1996:98; Warde 2005:135). It was from this premise that Lloyd (2010c) conceptualised information literacy as a dispersed information practice. Details of this conceptualisation are discussed in the next section.

4.4 INFORMATION LITERACY PRACTICE FRAMEWORK

Lloyd (2010a:249) frames information literacy as an information practice, that is, a dispersed practice. Lloyd (2010a) names this framework an ‘information literacy practice’. According to Lloyd (2010a:249-253), information literacy practice is a knotted-together bunch of information-focused activities that interlace through the net of integrative practices that shape and constitute a site. As Papen (2013:4) observed, this means the focus is on the literacy practices of the site; that is what people do in the site. Therefore, information literacy practice constitutes the way things

are done in a community (Lloyd *et al.* 2013:126). Here, Lloyd *et al.* (2013) suggest that information literacy practice is influenced by the knowledge construction emanating from the co-location and co-participation in the everyday life of a community.

According to Lloyd (2010a:251), information literacy practice is underpinned by Barad's (1996:180) notion that "knowledge is always a view from somewhere". Lloyd (2010a:251) suggests that a "view from somewhere" emphasises the notion that it is through the social site that information is deemed a meaningful social phenomenon and contributes to knowledge creation and sustenance. She asserts that knowledge of the practices (activities) of the social site enables the enactment of information literacy practice. This suggests that the social site provides information affordance that facilitates novices' (newcomers) engagement with the information practice (activities) as well as the grounded information skills development to learn the practices of the site (Fenwick 2006:699; Lloyd 2010a:249-251; Lloyd 2010b:3-4). The conception that knowledge is viewed from somewhere is relevant in formulating information literacy practice within other higher-order practices such as those in the Kente-weaving landscape. Considering that information literacy practice is a communal activity shaped by socio-cultural factors, the practices do not exist by themselves and as such cannot be studied out of context (Eckerdal 2011). By acknowledging the importance of the socio-cultural factors, Eckerdal (2011) appears to agree with Lloyd (2010a:252; 2011:285-286) regarding the point that information literacy practice does not constitute a reified or decontextualised suite of skills that are distant from the integrative practices that underpin and drive human interaction and activity; rather it is organised and arranged through the social site. It is because of this that Lloyd (2010a:252) emphasises that information literacy practice constitutes and reflects the ontological and epistemological phenomenon of the site.

Information literacy practice is embedded in the process of knowing and becoming informed (Limberg, Alexandersson, Lantz-Andersson & Folkesson 2008:83; Lloyd 2010a:253; Lloyd 2011:285-286; Papen 2013). That is, the site sanctions the understanding of what is considered information or knowledge and the ways of knowing (Lloyd 2012:774). Here, information literacy practice reflects the effective access and use of embedded information resulting from the lived experiences and practices in the workplace (Lipponen 2010:60; Williams, Cooper & Wavell

2014:3). This, according to Lipponen (2010:60), results in an embodied workplace understanding of the work practices which is otherwise referred to by Lloyd (2004:222-223) as becoming information literate.

According to Lloyd (2010a:253), information literacy practice constitutes more than the totality of the information skills or competencies that are mostly used to portray it. From a practice perspective, the concept of what comprises competence and competent action is understood from the social setting in which a person participates (Lloyd 2010a:253; Lloyd 2011:285-286). This seems to subscribe to Sandberg's (2000:55) point that gaining competence is pivotal in performing work practices; however; it is only through interaction with others that work practices can be performed in an acceptable way. This notion emphasises how crucial the social construction is in terms of what constitutes a competent action. Lloyd (2010a:253) subscribes to this view to conclude that competence at the workplace is influenced by what is spoken of and done (i.e. *sayings* and *doings*) within a social site. Central to the idea of competence is the notion that knowledge is local and viewed within the context of the site (Barad1996:180; Lloyd 2010a:253). This presupposes that information literacy skills and competence are site-specific (Lloyd 2007; Lloyd 2010a:253; Pilerot 2016:415). This means that becoming information literate in the workplace translates into becoming a competent practitioner, therefore enabling the participant to advance from novice to expert within the community of practitioners (Lloyd 2006a). This, according to Lipponen (2010:60), suggests that Lloyd's (2010a) information literacy practice is both an epistemological and ontological process of personal and social transformation; processes that construct identities and positions in a community of practice. It is from this perspective that Eckerdal (2011) views learning as the outcome of information literacy practice. This resonates well with the Kente-weaving landscape as discussed in Chapter 5, where novices are learning to become competent or master weavers.

Lloyd (2010a:253) asserts that the understanding of information literacy practice is tied to the understanding of how the work practices are shaped, formed and enacted through the interactions among people, material objects and knowledge within the workplace (site). This therefore suggests that meaning is gained through the way information literacy practice manifests as actions and activities, focusing on the information and knowledge that are sanctioned and shaped

by the socio-cultural, historical, political and economic dimensions (Limberg *et al.* 2008:83; Lloyd 2010a:253; Lloyd 2011:285-286). Lloyd (2010a:253; 2011:285-286) emphasises that information literacy practice is a way practical intelligibility or 'know-how' is constructed and drawn from the activities-generated information to perform and relate in a community of practice. This, according to Herring (2011), constitutes reflective activities on the information-related activities in a community of practice.

From the above discussion, it is evident that information literacy practice is a practice-learning-conceptual framework that explains how novices become proficient in the practices of a site. According to Lloyd (2010a:254; 2011:286), information literacy practice comprises four information activities, namely, influence work, information work, information sharing and information coupling. Sections 4.4.1 to 4.4.4 examine these activities.

4.4.1 Influence work

Influence work constitutes the work and activities by which experienced and competent members draw newcomers of the community towards the sanctioned knowledge sites as well as engage them with the implicit and explicit information regarding the culture, tradition, history, performance and practice of the site (Lloyd 2010a:254). Leith and Yerbury (2015:15) suggest that the purpose of influence work is to inform newcomers of the practices of the site by sharing the organisational meaning. Lloyd (2010b:173) emphasises that influence work enables newcomers to have a shared knowledge of the practice. This, according to Lloyd (2010b:173), could take place in the form of storytelling, events narrations or material-usage-procedural interpretation. Following this, Lloyd (2010b:173) asserts that influence work shapes the way information is accessed, understood, valued, disseminated and shared in the community of the site.

Influence work constitutes the mediating activities of participants among themselves as well as the interaction with novices or newcomers (Lloyd 2010a:254; Lloyd 2010b:173; Lloyd 2010c:55). Through interaction, novices (newcomers) negotiate their identities and establish ways of understanding and interpreting shared practice (Lloyd 2010a:254; Lloyd 2010b:173).

According to Lloyd (2004:221; 2010a:254; 2010c:55), this interaction ensures the continuity of the unique features that characterise the site through negotiation, and interpretation of shared meaning, thereby drawing newcomers into the practice of the community.

4.4.2 Information work

Researchers have different views on what constitutes information work. Despite the different views of the concept of information work, Huvila, Budd, Lloyd, Palmer and Toms (2016) emphasise the information-centric role of information either as main work or as a part of everyday work as key to what constitutes information work.

Palmer, Cragin and Hogan (2007:808) understand information work in terms of the activities involved in finding and using information. Palmer, Cragin and Hogan's (2007:808) notion of information work suggests information technology use in some cases, for example, gathering information from databases and online resources. They describe information work as the activities involved in the gathering of information from databases, literature, online resources and colleagues. According to them, information work encompasses the management, integration and application of discovered information to advance research.

For Huvila (2009:697), information work refers to the information element associated with human activity. He contends that all human work has information or information processing elements, be it manual labour or abstract decision-making. In addition, Huvila (2013:1376) suggests information work would appear as a secondary and underlining activity that supports the main activity and provides a framework that explains the mechanisms of the work. He however, explains that in information-intensive settings like archives and libraries, information work would be the main activity.

Lloyd (2010b:171) understands information work from the context of the workplace. According to her, information work refers to the ways and the appropriate information skills participants use to engage with information and sites of knowledge that reflect the ways things are done – as sanctioned by the community. Lloyd (2010a:254) asserts that information work emerges in the

form of bodywork which produces corporeal and embodied understanding and meaning. It encompasses the information derived from the lived and actioned experiences of others (Lloyd 2004:221). According to Lloyd (2010a:254), information work is focused on the development of practical information skills that are sanctioned as useful and suitable for learning and knowledge (re)production in a community of practice. Thus, information work changes the information practices of new members towards the sanctioned information modalities constituting the embodied knowledge in the community (Lloyd 2010a:254; Olsson & Lloyd, 2017b). Relating this to the Kente-weaving landscape, the example of novice weavers observing and practising the master weavers' work practices to engage with the embodied Kente knowledge will constitute information work.

4.4.3 Information sharing

Like the concept of information work, there are varied interpretations of what information sharing is. According to Pilerot (2015), the varied interpretations stem from differences in theoretical perspectives as well as how researchers apply the concept of information sharing in empirical research.

Pilerot and Limberg (2011:314) interpret information sharing as the sharing of educative data and documents in the context of work. They suggest that the educative data and documents shared become acquired information for the receiver. According to them, the notion of data and documents resonates well with Buckland's (1991) notion of 'information-as-thing'. They are also of the view that the provision of directions to someone constitutes information sharing. As an activity, Pilerot (2013) and Pilerot and Limberg (2011:314) suggest that the concept of information sharing relates to other information activities such as information seeking and use.

Sonnenwald (2006) on the other hand, understands information sharing as a collaborative activity that provides information to participants. This activity is either shared upon their request or by proactive engagement, to enhance and create a shared understanding of the specific site. According to Savolainen (2017), Sonnenwald's notion of sharing information highlights two major aspects, namely, the giving and receiving of information from others. He suggests that giving and receiving information typify a form of human communication in an everyday context.

This, according to Savolainen (2017) includes the transfer of ideas, facts, messages, opinions and documents. This notion of information sharing includes confirming that the provided information has been received and understood (Sonnenwald 2006).

For Lloyd (2009), information sharing constitutes the interaction and enabling dynamics that facilitate the dialogic relationship (e.g. the relationship between a master weaver and novice weaver), which in turn affects the influence and information work within the information literacy practice. The notion of a dialogic relationship resonates with Sonnenwald's (2006) notion of information sharing in that participants within a group (or work site) give and receive information. This makes information sharing an activity that centres on ways of acting through negotiation and a shared understanding and agreement (Lloyd 2010c:55). According to Lloyd (2010a:255), information sharing is central to both influence and information work in information literacy practice. This is to say that information sharing underpins and embeds both influence and information work. Lloyd (2010a:255; 2010b:174) perceives information sharing as a purposeful activity that enables the giving and receiving of information by members of the community as well as being influenced by what is said and done. However, attention is given to the receipt of information when considered from the perspective of social practice. Hence, in this study, the focus is on the receiving aspect of information sharing and the sense-making thereof. This enables novices to access the 'know-why', 'know-that' and 'know-how' knowledge of the practices of the work site.

4.4.4 Information coupling

Researchers differ in their understanding of the concept of information coupling. Leong, Byrne, Clackson, Georgieva, Lam and Wass (2017:13293), for example, use the concept of "information coupling" in the context of social interaction between adults and infants; in reference to the interpersonal synchronisation of the cues resulting from gazing and speaking that enable the minds of infants' and adults' to align temporally to enhance information transfer during communication and learning.

It appears that Lloyd's (2010a:255) understanding of the concept of information coupling is underpinned by the dictionary meaning of the word 'coupling'. Merriam-Webster (2020) defines 'coupling' as the act of 'bringing together'. It specifically refers to a sexual union as well as other definitions that are computer systems and electronics related. It seems that it is from this understanding that Lloyd conceptualises information coupling as the bringing together of experiential, relational and explicit knowledge to produce a way of knowing through an inter-subjective understanding within the site. According to Fafeita and Lloyd (2012:98), information coupling entails engaging with the content of the site and reflecting on the effectiveness of novices' information practice. Lloyd (2010b:174) explains that information coupling focuses on the situated information modalities accessed within the site. She suggests that the bringing together of the information modalities is done reflexively and reflectively (Lloyd 2010a:255). This, according to her, is central to the transition – where a novice becomes an expert through the engagement with content and individual information practice against the established ways of knowing within a site (Lloyd 2010a:255). Lloyd's understanding of the concept of information coupling is used as a point of departure in this study.

It is important to note that Lloyd (2010a) does not provide any model to simplify and describe her conceptual notion of information literacy practice. However, in consideration of the discussion on Lloyd's (2010a) theoretical concept of information literacy practice, the information activities are illustrated in Figure 4.1.

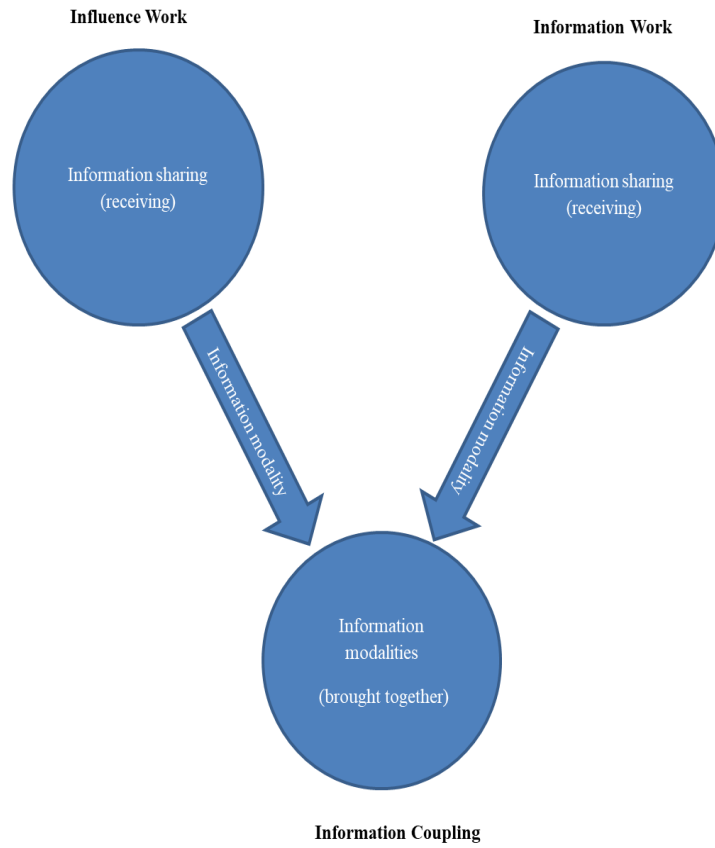


Figure 4.1: Model illustrating Lloyd's (2010a) information literacy practice

The circle that denotes 'influence work' represents the information competent practitioners share with novices of the site. Thus, the circle exemplifies the information novices receive because of competent practitioners' information sharing in the workplace (site). The information includes the tradition, history, performance, actions and (activities) that enable novices to have a shared understanding and knowledge of the practices of the site.

The circle that denotes 'information work' represents the development of practical information skills in the workplace (site). The information work circle exemplifies the bodywork novices engage in to learn how to perform the practices of the workplace (site). It represents the information novices receive or access from the lived experiences with other practitioners in the site.

The directional arrows pointing toward the circle denoted ‘information coupling’ are used to represent the nature and form of the information that novices need to access to enhance their knowledge.

The bottom circle denotes information coupling and exemplifies the reflective and reflexive activities that novices engage in to *know*. It represents absorbing or assimilating the information experiences encountered from both influence and information work to perform the work activities.

The information activities (i.e. influence work, information work, information sharing and information coupling) underpin *knowing* the site and its practices. According to Fafeita and Lloyd (2012:98), the information activities facilitate knowledge construction by connecting participants (practitioners) with the valued and sanctioned information modalities of the site. In her framework, Lloyd (2010a:255) explains that information literacy skills are not the focus as they are constituted through practice. In her view, the focus is on the collection of activities forming the practice of the site. Furthermore, she explains that the knowledge site coupled with the sanctioned information modalities as well as the material objects within the site influence the enactment of information literacy through the social site.

According to Lloyd (2010a:255), what is sanctioned within the site determines the information literacy activities. She explains the community sanctions, the information modalities and ways of *knowing* within the site. The example Lloyd (2010a) gives comes from the education domain which is an epistemic domain. She argues that the epistemic nature of the education domain is the reason why information literacy relates to users’ experience with print (text) and digital information environments. Lloyd (2010a:255-256) explains this when she states that information literacy in the workplace requires a different set of experiences that comply with work performance requirements such as practical knowledge and ‘know-how’ that is embodied through experts’ knowledge and their shared understanding of the work environment. The practical knowledge and ‘know-how’ requirements explain the reason why Lloyd (2010a:255-256) asserts that information literacy is enacted through the social or corporeal information

modalities with the social and embodied understanding of the practice that result in competence in the workplace.

“To know”, as defined in section 2.3.3, means being competent in practice. This suggests that information literacy enables the novices of the workplace site to *know* and therefore become competent (Lloyd 2006b:571; Lloyd 2012:772). Lloyd (2005) and Moring and Lloyd (2013:7) contend that developing competence in practice is underpinned by access to information from relevant sites of knowledge. This suggests that information literacy is a cultural and transformative process or activity (i.e. a way of *knowing*) where novices access information to make meaning from the sites of agreed knowledge about practice and profession (Lloyd 2005; Moring & Lloyd 2013:7). This, in turn, suggests that through the engagement in information coupling activities, novices *know* the practice of the site. Their identities change. In this process, novices change from being incompetent (i.e. information illiterate) to being competent (i.e. information literate) in the practice of a site. Here, the novices transition to embody the practice of the site. Figure 4.2 illustrates this transformation from incompetence to competence.

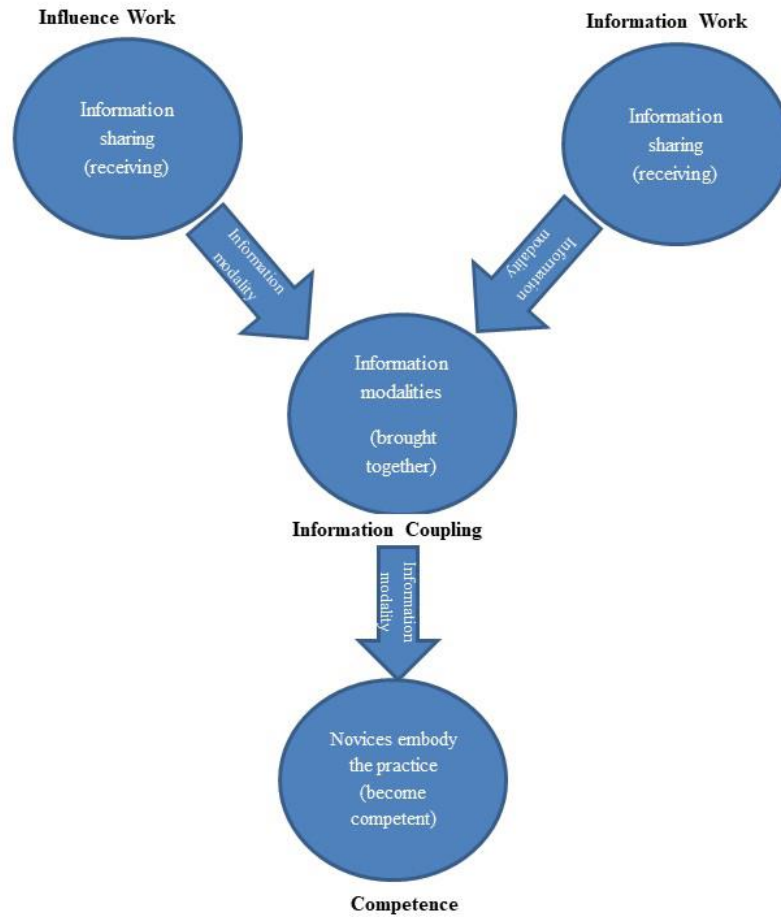


Figure 4.2: Model illustrating Lloyd's (2010a) information literacy practice and competence building

The directional arrow underneath the information-coupling circle depicts the transition into competence. The circle that denotes competence represents the development of 'know-that' 'know-why' and 'know-how' knowledge in the site. The circle represents the situation where novices have become competent practitioners of the site. Here, the novices understand the practice and can perform the practice competently.

4.5 APPLICATION OF LLOYD'S FRAMEWORK FOR INFORMATION LITERACY PRACTICE

It appears that few researchers have applied Lloyd's framework for information literacy practice in research, since its inception in 2010. In Australia, Leith and Yerbury (2015) applied Lloyd's framework for information literacy practice to study the knowledge and experiences staff share within and across two multi-disciplinary local-government organisations. They found that Lloyd's (2010a) four information literacy activities are crucial in the experiential description of knowledge sharing toward environmental sustainability.

Though few researchers have applied Lloyd's framework for information literacy practice in research, the underlining theory (i.e. Schatzki's practice theory) from which it was developed has been applied in information literacy research. For example, Schreiber (2014) employed Schatzki's practice theory to analyse written assignments as practice in the context of information literacy. In her study, Schreiber's (2014) focus was on gathering information on students' everyday-study-life activities. She found that written assignment in the context of information literacy was represented by the description and use of scientific knowledge as well as the use of information activities to demonstrate scientific knowledge.

Lloyd *et al.* (2013:121, 138) also use the Schatzkian practice lens to explore how refugees learn and engage with a complex information landscape. In the same study, they also explore how the refugees' information literacy practice is constructed to enable them to connect to the new information landscape. They found that there are barriers that inhibit social inclusion. These barriers include socio-cultural factors, such as language differences, cultural unawareness of the sanctioned information practices and activities and the overwhelming amount of both mediated and unmediated information the refugees have to deal with. They also found that for social inclusion to be possible, information should be shared through trusted mediators who help refugees navigate the information landscape through visual and social sources.

Bonner and Lloyd (2011:1213) also utilised the Schatzkian practice lens to explore how renal nurses' information experience and information practices support their everyday practice. They

found that renal nurses' information practices entail mapping the information landscape to draw on epistemic (textual), social and corporeal sources of information. They also found that renal nurses couple the information drawn from various sources to inform their practice of renal nursing.

In addition, Sundin, Francke and Limberg (2011:675) also made use of the Schatzkian practice lens to study information literacies in print and digital environments. The study sought to provide an understanding on the ways students assess the credibility of the sources used in a school environment with a focus on participatory genres. They identified four approaches to assessing credibility, namely, control, balance, commitment and multiplicity. These approaches were deemed crucial to assessing the credibility of information sources in the school environment.

The above studies attest to the fact that the application of Lloyd's (2010a) framework for information literacy practice to craft landscape, and specifically the Kente-weaving landscape, is a novel approach.

4.5.1 Criticisms of Lloyd's framework for information literacy practice

As with many theories and conceptual frameworks, there are criticisms. The criticism regarding Lloyd's (2010a) framework for information literacy practice has to do with the socio-cultural perspective it assumes. According to Lundh and Limberg (2008:94), and Pilerot (2016:418), the socio-cultural perspective assumes that all learning is contextual and situated in different practices. Having been crafted from the socio-cultural notion, Lloyd's (2010a) framework for information literacy practice endorses the notion that learning is a social phenomenon and therefore the situated practices (activities) and context influence what is learnt and how it is learnt. According to Addison and Meyer (2013), and Hicks (2018b:74), the problem with the socio-cultural perspective is that it endorses relativism and a no-size-fits-all approach to information literacy. This perspective, according to Addison and Meyer (2013), does not mesh well with the prevailing institutional learning structures and skills-based approach that accentuates the traditional authority of librarians. This is because this perspective shifts information literacy from formal contexts of education to an everyday activity people engage in

by emphasising the context and social collaboration as a tool of information literacy (Addison & Meyer 2013; Hicks 2018b:77; Lloyd 2010b:72).

4.5.2 Relevance of Lloyd's framework for information literacy practice to this study

Despite the purported issues and criticism of Lloyd's framework for information literacy practice, it provides the following relevance to this study:

- It enables the researcher to conceptualise the Kente-weaving practice and where it takes place as a site where information literacy is enacted in social life through the situated activities, arrangements and skills from the Kente-weaving practice. In line with Schatzki's (2001) view, the conceptualisation of the practice as a place where information literacy occurs enables the researcher to interpret information literacy as a dialogic intra-group process and activity that facilitates shared understanding and skills development.
- Lloyd's framework for information literacy practice upholds the notion that knowledge domains differ and provide a contextual lens to understand how information literacy activities occur in the Kente-weaving landscape. This implies that Lloyd's framework for information literacy practice provides the contextual lens through which to analyse and understand the specific ways of *knowing* the Kente-weaving landscape.
- Alluding to Schatzki (2002:87) and Moring and Lloyd (2013:8-9), Lloyd's framework for information literacy practice aids the researcher in explaining how, through the *doings* and *sayings* (what is spoken) in the Kente-weaving landscape, people become competent (knowledgeable) practitioners.
- Lloyd's framework for information literacy practice acknowledges the socio-cultural factors (people, interaction, information, arrangement, and material objects) as crucial to learning.

Based on the above relevance, the researcher adopts Lloyd's framework for information literacy practice to partly guide and explain this study.

The situated learning theory is also used to partly guide and explain this study. It is examined in the next section.

4.6 SITUATED LEARNING

Lave and Wenger's (1991:15) situated learning theory is a social practice theory that explains how people become competent practitioners in a community of practice. The theory holds the assumptions that learning is continuous and increasing participation in a community of practice (Lave & Wenger 1991:49). According to Teeuwsen, Ratković and Tilley (2014:683), Lave and Wenger's (1991:15) situated learning theory and Wenger's (1998) community of practice premise the following:

- people are social beings;
- knowledge relates to competence about a specific practice;
- *knowing is doing*
- learning enables the formation of meanings and identities.

The above premises suggest that *knowing* and *learning* are integral to the situated learning theory. Lave and Wenger's (1991:15) situated learning theory challenges the traditional notion that perceives learning as an individual activity. The theory perceives learning as a social process of meaning making that is situated in both the historical and cultural context (Farnsworth, Kleanthous & Wenger-Trayner 2016:140). That is, rather than as an individualised knowledge formation process, learning is conceived in terms of the relational and interactive process that enacts *knowing* (Gherardi 2001; Orlikowski 2002; Hakkarainen Palonen, Paavola & Lehtinen 2004:11). This, according to Morley (2016:161), emphasises the notion that practice sharing advances learning and professional identity formation. According to Lave and Wenger (1991:35, 53), learning is not a reifiable process that happens to be located somewhere in practice, rather, it is an integral and vital part of generative social practice which involves the whole person (body and mind) about social communities. It is seen as a progressive process of engaging, imagining and aligning with the practices of a landscape (Wenger-Trayner & Wenger-Trayner 2014).

In his foreword to Lave and Wenger's book on situated learning theory, William F. Hanks says situated learning is the focal point in the notion that understanding, meaning and learning are defined in the context of an action (Lave & Wenger 1991:15). According to him, the focus of situated learning is on how learning takes place in social situations through participation. Fuller, Hodkinson, Hodkinson and Unwin (2005:51) explain the process that membership in a community of practice results in participation. According to them, participation subsequently enables learning to take place. In other words, people learn through participation in social practices over time (Farnsworth, Kleanthous & Wenger-Trayner 2016:140). This, according to Velarde (2020:575), follows that learning is not by accident, but it takes place through intention, investment of resources and participation.

Wenger (1998:55-56) describes participation as the active process that involves the whole person taking part in the "social enterprises" in terms of membership in a social community. He suggests that participation entails taking part in some activity in relation to others. Teeuwsen, Ratković and Tilley (2014:683) describe participation as a way of *knowing* or learning a practice. William F. Hanks (in Lave & Wenger 1991:22) asserts that the notion of participation suggests that learning is incremental access to the performance. This, he explains, in turn, suggests that the way to maximise learning is to perform, and not provide a narrative about it. Hence, the process of increasing and changing participation in a specific community of practice results to learning (Lave & Wenger 1991; Teeuwsen, Ratković & Tilley 2014:683). As such, participation entails the negotiation and renegotiation of meaning to enable understanding and experience of the practice through interaction (interpretation and action) (Lave & Wenger 1991:51-52; Wenger 1998:53-54). Underpinned by this notion of negotiation of meaning in participation, Moring and Lloyd (2013) contend that negotiation of meaning entails the ways people partake in and achieve membership in a community of practice. In this sense, Wenger (1998:56), and Wenger, McDermott and Snyder (2002) emphasise that participation is both a personal and social phenomenon that involves talking, thinking, doing, feeling and belonging in the community of practice. This, according to Farnsworth, Kleanthous and Wenger-Trayner (2016:149), suggests that the individual must interplay with the social to enact learning. They suggest that without individual and social interplay, learning cannot take place. It is on this premise that Smith

(2017:152) makes the point that rather than participating in meaningless activities that advance newcomers' marginalisation, participation needs to entail activities that lean towards *knowing* the enterprise of the community. As Arnseth (2008:294) observes, Lave and Wenger's (1991) situated learning theory treats learning and thinking as experiential and lived-in-world activities in social practice. Thus, learning entails engagement in the activities, conversations and reflections in the community of practice (Lave & Wenger 1991:51-52; Wenger 1998).

The concept of 'community of practice' does not exist independently. It constitutes a broader conceptual framework for framing learning within its social spectrum (Wenger 2010:17). Wenger, in conversation with Farnsworth and Kleanthous (in Farnsworth, Kleanthous & Wenger-Trayner 2016:143), refers to the concept of 'community of practice' as a social process by which people negotiate competence over time in a domain of practice. This suggests that the process of participation in practice (re)produces newcomers as part of a community of practice. According to Bonnette and Crowley (2020:145), a community of practice is not defined by physical boundaries; it is rather defined by the shared practices, customs and knowledge that characterise an enterprise. A community of practice is also characterised as being more than just a storehouse of technical knowledge and skills that are ingrained in the activities of the community (Lave & Wenger 1991:98). They assert that in a community of practice, there is an inherent condition that enables knowledge to exist through the interpretive support from which sense is made from the community's heritage. Following this, Fuller *et al.* (2005:52) are of the view that situated learning theory suggests that knowledgeable practitioners in a community of practice are not only those who can exhibit technical knowledge and skills, but includes those who through membership have become full participants in a community. In such a situation, what is learnt and how it is learnt is driven by the socio-cultural context of the community of practice (Lave & Wenger 1991; Kirk & Kinchin 2003:223).

According to Lave and Wenger (1991:15), learning is a process that transforms people and takes place in a participatory framework in the community and not merely in the minds of people. This notion emphasises the importance of social construction to *knowing*. They explain that learning entails becoming a full participant or a kind of 'different person capable of participating in and performing new and increasingly complex tasks or activities and grasping new understanding in

a system in a social community. This, according to Zaffini (2018:39), means that examples are presented to newcomers to further enable them to learn from and become mature practitioners in the community. She is of the view that as newcomers participate and maintain the community's tradition, they may even discover new practices to change the community.

In summary, the situated learning theory suggests that learning is a process where newcomers to a community move from a legitimate peripheral to full participation in a community's practices (Lave & Wenger 1991:71,80). The learning of knowledgeable skills is subsumed under this transitional social process (Lave & Wenger 1991:29; Lloyd 2010b:23). According to Lave and Wenger (1991:35), legitimate peripheral participation is a composite concept that should be treated as a whole to communicate its meaning. Thus, each aspect of the concept cannot be viewed in isolation; rather, all the aspects are vital in defining others (Lave & Wenger 1991:35). According to Lave and Wenger (1991:29), legitimate peripheral participation centres on the process by which newcomers are accepted in or become participants of a community of practice. Smith, Hayes and Shea (2017:213) describe it as the background condition for newcomers to be included in a community of practice. Legitimate peripheral participation characterises and describes the ways newcomers are afforded room for learning eventually to become old-timers (competent practitioners) in a community of practice through physical and social engagements (Lave & Wenger 1991:35). Following this, Lave and Wenger (1991:35) assert that there is nothing like an "illegitimate peripheral participant" in a community of practice.

Legitimate peripherality centres on newcomers gaining access to all that membership entail in the community of practice (Lave & Wenger 1991:100). According to Lave and Wenger (1991:95), "legitimate peripherality" provides newcomers with more than just an "observational lookout post": It entails participation as a way of learning practice of a community that is newcomers embedding themselves and also at a point being embedded by the community in the "culture of practice". This enables newcomers to develop skills in the community of practice. However, Lave and Wenger (1991:95) state that this is gradual as the newcomers increasingly gain an overview of what constitutes the community of practice. Getting an overview or general idea also involves gaining a steady understanding of how the old-timers and near-peers conduct their lives in the community (Lave & Wenger 1991:95). In short, legitimate peripherality means

given productive access to the activities in the community of practice (Lave & Wenger 1991:104). According to Smith (2017:151-152), the notion of legitimate peripheral participation provides better preference to the alternative situation of situating newcomers immediately into more complex and more-rigorous activities. He gives the example that in carpet making, novices are not immediately given resources and are left to weave carpets on their own. He suggests that they are guided and given easy tasks first.

According to Lave and Wenger (1991), legitimacy is granted by an old-timer by accepting the newcomer as an apprentice in the community. This enables the newcomer access to information from the knowledge sites. The concept of legitimate peripheral participation suggests that learning is by participating in a community of practice to master the knowledge and skills that require novices (newcomers) to shift toward full membership among the community of practitioners (Lave & Wenger 1991:29). According to Harris (2010:46), as competency increases and working relationships develop, novices move to the full participating tasks in the community of practice.

Legitimate peripheral participation relates to skilled identity development in practice as well as the reproduction and transformation of the community of practice with regard to membership in terms of trajectories and relationships (Lave & Wenger 1991:55). According to Lave and Wenger (1991:35-36), learning through legitimate peripheral participation means that newcomers initially participate in simple, low-risk tasks (including running errands) sanctioned by the community of practice. They call the engagement in these simple, but important tasks “peripheral participation”. Peripherality suggests an opening that gives room to gain understanding through continuous and growing participation in the practice of the community (Lave & Wenger 1991:35). As the newcomers become conversant with the less engaging and simple tasks, they later move and engage inwardly in more-rigorous and intensive activities of the particular community. They call the engagement in more-rigorous and intensive activities “full participation” (Lave & Wenger 1991:36-37). Brooks, Grugulis and Cook (2020) assert that the movement from simple tasks toward more-rigorous activities enables newcomers to gain skills and knowledge from experienced colleagues to become full members of the community.

The activities undertaken during “full participation” are more complex as compared to those in “peripheral participation”. Hence, as the newcomers draw into full participation, their competency improves until they ultimately become competent practitioners of the community. Here, newcomers master the knowledge and skills in the community of practice (Lave & Wenger 1991:29; Harris 2010:46). According to Lave and Wenger (1991:111), centripetal movements toward “full participation” enact newcomers’ sense of identities toward mastery of the practice of the community. Thus, it is through engagement in full participation that newcomers’ identities form in terms of community membership (i.e. becoming competent among a community of practitioners) (Lave & Wenger 1991:42-43; Wenger 1998:152). As newcomers access and engage with the complex and central activities of the practice, they gain broader and in-depth knowledge of the entire practice of the community and not one particular task (Lave & Wenger 1991:69-71). This, according to Isah (2012:117) leads to the newcomers becoming competent practitioners.

Although Lave and Wenger (1991) do not graphically present any model to illustrate their theory, Figure 4.3 graphically illustrates Lave and Wenger’s (1991) situated learning theory.

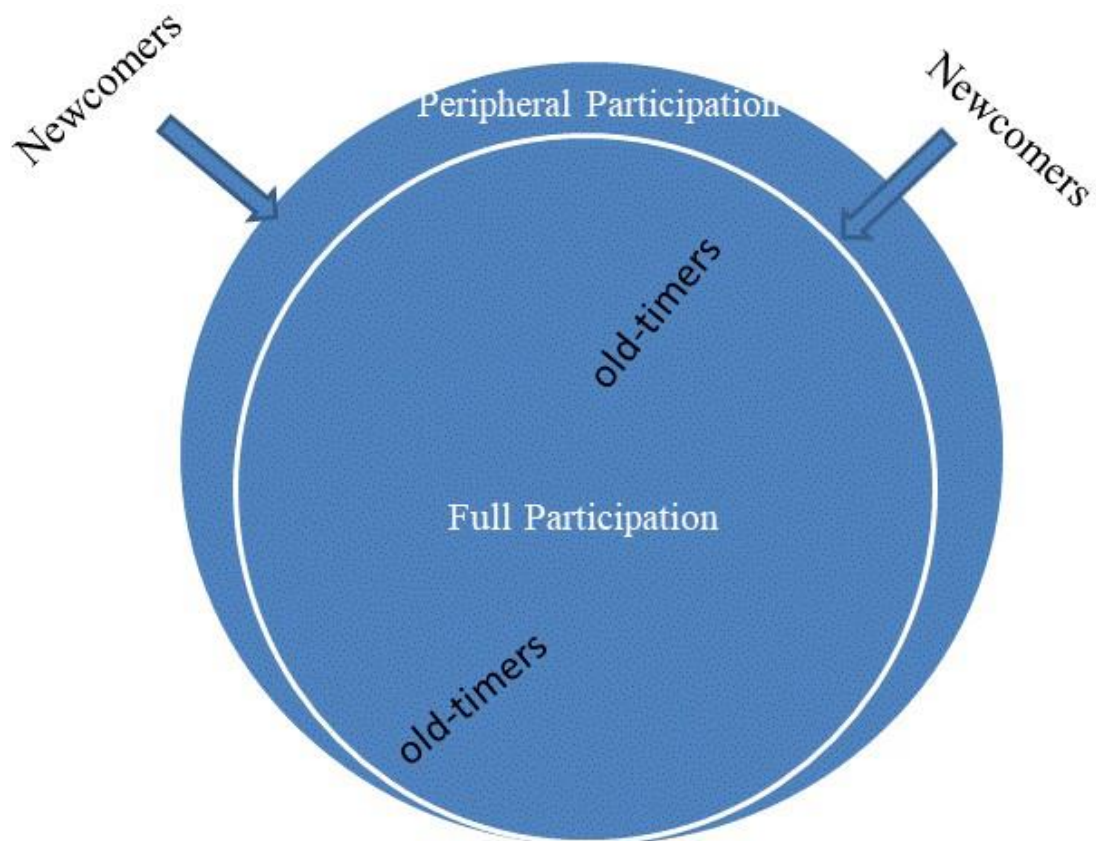


Figure 4.3: Model illustrating Lave and Wenger’s (1991) situated learning theory

Newcomers enter the community of practice and engage in peripheral activities. The “peripheral participation” portion represents engagement in the peripheral activities (i.e. easy and simple activities) in the community of practice. When the newcomers (novices) become conversant with the peripheral activities, they transition to engage in the full participating activities (rigorous and complex activities) in the community of practice.

4.7 APPLICATION OF THE SITUATED LEARNING THEORY

Since its development over 30 years ago, Lave and Wenger’s (1991) situated learning theory has been the theoretical foundation upon which many studies rested. Many researchers have applied it to guide and explain their studies (e.g. Bryant, Forte & Bruckman 2005; Lipponen 2010; Moring 2011; Samimy, Kim & Lee 2011; Townend & Brown 2016; Yim & Ahn 2018; Bonnette & Crowley 2020; Brooks, Grugulis & Cook 2020; Velarde 2020).

Bryant, Forte and Bruckman (2005) used it to understand active collaborators-users' experiences of Wikipedia. They were interested in users' perceptions and motivations for users' increasing engagement in the Wikipedia community. They found that as users transition from peripheral to full participation, their activities are transformed in the dimensions of transformation subjects.

Lipponen (2010:61) partly used it to examine the widely accepted definition of information literacy put forward by the ACRL (2000). He demonstrated that information is situated and distributed among individuals in the community of practice. By this, he explained that information literacy is not an individual competency thing but a community inherent.

Moring (2011) used it to investigate organisational newcomers' information practice through the lens of situated learning. She analysed the newcomers' information seeking as an embedded part of their learning process. She found that newcomers' information practice is (re)negotiated between individuals and across communities of practice.

Samimy, Kim and Lee (2011) applied it to investigate the learning trajectories of students teaching courses in teaching English as a Second Language. They found that the feeling of learning at the periphery resulted in negative identity formation in students, culturally and linguistically. To surmount the negative identities, they suggest that students must use the appropriate resources and have a hopeful image to renegotiate their identities.

Townend and Brown (2016) use it to explore and gain an understanding of the academic self-concept of gifted-disabled students. They found that external and socio-cultural forces influence the internal forces in the construction of academic self-concept.

Yim and Ahn (2018) applied it as an analytical lens to study the participation process of foreign native English-speaking instructors. They found that foreign native English-speaking instructors' desire to participate fully in the local teaching community is hindered by the ideological and institutional factors of the school system.

Bonnette and Crowley (2020) used it as a theoretical lens to analyse the diverse relationships among emancipated emerging adults who are residents in a transitional house and engage with the affiliated museum. They found that providing learning support to emancipated emerging adults requires that attention be paid to extrinsic motivators.

Brooks, Grugulis and Cook (2020) applied it to study newcomers' learning in fire and rescue service departments in the United Kingdom. They found that the presence of newcomers enhances experienced firefighters' learning. They found that the presence of newcomers impacts on experienced firefighters and enables them to do their work effectively. They therefore conclude that a community of practice without newcomers is damaging to it and can have a negative impact.

Velarde (2020) for instance applied the situated learning theory to investigate volunteers' informal learning experiences in hospitals in Germany. She found that since volunteers were limited to routine tasks, their scope of learning was also limited to the hospital context. According to her, learning becomes a matter of challenging the boundaries set for volunteers. She suggests that learning medical skills hinges on volunteers' readiness to avail themselves as helpers. This, however, she concludes may lead to instances of flouting the regulations of the hospital.

4.7.1 Criticisms of the situated learning theory

Lave and Wenger's (1991) situated learning theory has received commendations from researchers for its rounded, ecological, and relational approach to learning. These researchers include Boylan (2010), and Fuller, Hodkinson, Hodkinson and Unwin (2005). Commendation notwithstanding, Lave and Wenger's (1991) situated learning theory is plagued with concerns and criticisms.

Brooks, Grugulis and Cook (2020:2-3) argue that the treatment of newcomers' learning as a seamless, linear and hierarchical process from the periphery to the core as assumed by Lave and Wenger's (1991) situated learning theory is problematic. According to them, newcomers'

learning is radial and a two-way process where newcomers learn from their experienced colleagues and vice versa. They assert that newcomers learning from experienced colleagues serve as an avenue to consolidate and reaffirm experienced colleagues' knowledge. They therefore assert that newcomers contribute actively and passively just by being present within the community and exhibiting their skills and knowledge.

Fuller *et al.* (2005) consider the theoretical notion of legitimate peripheral participation as being overly focused on newcomers mastering a practice. According to Fuller *et al.* (2005) and Teeuwsen, Ratković and Tilley (2014), this theoretical notion treats engagement in practice as that which has a singular endpoint (i.e. newcomers becoming old-timers). Teeuwsen, Ratković and Tilley (2014:684) explain that the usage of the terms 'newcomers' and 'old-timers' contribute to this narrow notion. According to Teeuwsen, Ratković and Tilley (2014:684), these terms create the assumption that identity is something that can be journeyed to an end or completed. They make the point that some journeys are rarely completed. They give the example of academics. According to Fuller *et al.* (2005) and Boylan (2010), the notion of newcomers mastering the practice ignores old-timers' learning trajectories. They argue that old-timers continue to learn in a community of practice. They assert that newcomers sometimes have the information and skills to influence the community of practice just as much as the old-timers do. It is on this deficiency that Gardiner (2016:105-106) critiques the theoretical concept of legitimate peripheral participation as being insufficient to elucidate the differing transitional roles of the experienced and newcomers' entries into a community of practice. He argues that experienced newcomers may come along with formal and cultural foundational training, personal reputations and professional identities that may impact on, or be in contradiction to, the sanctioned norms, practices and understandings of the new setting. According to Fuller *et al.* (2005) and Gardiner (2016:105-106), this may lead to the development of shared meaning whereby newcomers infuse their identities in the community of practice or generate counter-productive responses that may impede legitimisation of new members. In line with the argument of developing shared meaning, Drew (2020) contends that Lave and Wenger's (1991) situated learning theory fails to recognise creative individuality. He argues that creativity and individuality are the underlining forces behind the social process. According to him, creative

people can influence social practices by providing alternatives to sanctioned ways of doing things that can be accepted by the community.

As also acknowledged by Lave and Wenger (1991), Brooks, Grugulis and Cook (2020) suggest that the situated learning theory appears to ignore the role of work structure in learning. They contend that the work structure of an organisation can facilitate or constrain learning. They explain further that while a work structure and design that provides access to other experts or experienced practitioners in a certain specific aspect of an organisation will facilitate learning, a work structure and design which does provide access to experts will restrict learning. Therefore, Brooks, Grugulis and Cook (2020) suggest that routine and narrow work boundaries limit interaction with others and therefore restrict learning.

Roberts (2006:633) criticised the failure of Lave and Wenger's (1991) situated learning theory to acknowledge the individual learner agency within communities of practice and the obscurity of political dimension that may affect practice participation. Similarly, Teeuwsen, Ratković and Tilley (2014:691) observe that the notion of legitimate peripheral participation fails to significantly address the effect that prior individual socio-cultural identities have on the individual as well as on the community's experiences.

Hughes (2007) observes that the notion of communities of practice appears to preach (in theory), what constitutes learning and at the same time, what learning ought to be. According to Hughes (2007), this cannot be as it will amount to the 'communities of practice' becoming both a theory of what learning is and what it ought to be. Wenger-Trayner (in Farnsworth, Kleanthous & Wenger-Trayner 2016:144) responds to this critique by stating that 'communities of practice' is unambiguously a theory of what learning is. However, he asserts that it is understandable for a theory to explain what learning is while simultaneously conveying what learning should be.

In addition, Fuller and Unwin (2004), and Paechter (2003:71) contend that Lave and Wenger's (1991) situated learning and the community of practice theoretical claims fail to articulate or even ignore the power relation. They explained that the relations of power have an impact on how the community is constructed and established. According to them, this may provide

opportunities or barriers to learning. Like Hughes' (2007) critique, Wenger-Trayner (in Farnsworth, Kleanthous & Wenger-Trayner 2016:151-153) responded to Fuller and Unwin (2004) and Paechter's (2003:71) contentions; Wenger-Trayner agrees in part that his situated learning theory does not significantly account for the structural power relations in the community. He made the point that though his theory does not significantly acknowledge power relation, he in no way denies power relation in the situated learning theory, just that he does not theorise it. The reason he gives is that situated learning theory is about learning and not about power. He explains that becoming competent in practice is a social process within which power relations are inherent in the learning process. According to him, the situated learning theory holds the assumption that there are power relations embedded in the theory and defines competence from the social perspective of learning. He therefore suggests that the claim to competence may be accepted or rejected by the practice community due to its structural power relation.

Although Illum (2006:110) sees Lave and Wenger's (1991) situated learning theory as a different system of learning distinct from the formal institutionalised method, researchers such as Fuller and Unwin (2004) find it to be dismissive of it. According to Fuller and Unwin (2004), Lave and Wenger's (1991) situated learning theory fails to acknowledge the role of formal education institutions as being crucial in the employees-entrant's learning process in the workplace. This, according to them is because of the weak notion that all knowledge is situated or context-specific. They argued that there are different kinds of knowledge; some are more situated than others. Following this, they make the point that knowledge-based qualifications and off-the-job learning provide an expansive dimension to pause, 'stand back' and reflect on work practices and therefore develop workforce.

According to Illum (2006:113-114), Lave and Wenger's (1991) situated learning theory fails to acknowledge where and how professional skills, knowledge and competence are developed. He contends that the silence of Lave and Wenger's (1991) situated learning theory on the development of professional skills and competence suggests covert learning or silent knowledge transfer where the professional skills, knowledge and competence development are shadowed. This, he criticises as being improbable because there is no established connection between

professional learning and social learning aside from the fact they occur in the same learning arena. He therefore suggests that Lave and Wenger's (1991) situated learning theory is a socialisation theory and not a learning theory.

Amin and Roberts (2008:365) criticise Wenger's notion of social practices. According to them, Wenger's notion does not clarify the properties of learning and *knowing* within social practices. In concordance with Amin and Roberts' (2008:365) assessment, Smith, Hayes and Shea (2017:221) make the point that clarity is warranted to explain the ways of *knowing* and *doing* in social practice.

According to Smith, Hayes and Shea (2017:221), the theoretical claim of the concept of community of practice suggests the important element of time. They explain that identity formation through the transition from newcomers to old-timers in term of the regime of competence demands the passage of time in a practice community. They critique that the community of practice concept does not provide the time frame needed to engage with the shared repertoire of the community.

When it comes to the issues of transmitting facts or procedures in the classroom environment, Boylan (2010:68-69) contends that legitimate peripheral participation has limited utility. He also emphasises the idea of peripherality to the practice through legitimate peripheral participation as being complex and connotes the notion of an antithesis to full participation. He therefore calls for the usage of an "ecological metaphor" to label practice as a centripetal movement.

4.7.2 Relevance of the situated learning theory to this study

Despite the purported issues and criticism of Lave and Wenger's (1991) situated learning theory, it provides the following relevance to this study:

- Lave and Wenger's (1991) situated learning theory provides the analytical lens to conceptualise the Kente-weaving landscape (site) as a community of practice where learning takes place. The concept of community of practice provides the analytical lens to

conceptualise the boundary of the Kente-weaving landscape within which competence, and the assessment and achievement of said competence, is readily defined in the community of practice.

- Lave and Wenger's (1991) situated learning theory provides a framework to theorise information literacy as a social enterprise. The theory would also help to explain that information literacy is not an individually derived competence activity but derived result of participation in the community. Consequently, this will help to explain that *knowing*, and for that matter, information literacy in the Kente-weaving landscape, is not just an individual and cognitive processing of the mind. Rather, it is an embodied understanding gained through actual work participation which leads to the construction of identities.
- The concepts of peripheral participation and full participation provide an analytical lens and tools to explain the information literacy process. These concepts would help to explain information literacy as a process from legitimate peripheral participation to full participation in the Kente-weaving landscape. This conceptual frame would aid the understanding of the epistemological and ontological processes of growing from novices to masters (competent practitioners) in the Kente-weaving landscape. Thus, the theory will help explain the identity formation in the Kente-weaving landscape.

The positive attributes, as discussed above, of this theory and its relevance to the study with specific reference to the Kente-weaving landscape outweigh the potential concerns.

4.8 INTEGRATING INFORMATION LITERACY PRACTICE WITHIN SITUATED LEARNING

The researcher sees Lloyd's (2010a) framework for information literacy practice as a good candidate for plug-and-play or integration with Lave and Wenger's (1991) situated learning theory. This is because Lloyd's (2010a) information literacy practice (which was framed from Schatzki's (2002) perspectives of practice), and Lave and Wenger's (1991) situated learning theory, both see practice as collections of activities in social life. These researchers reject the dualistic notion of knowledge. The agreement on these assumptions suggests the compatibility of the two theories. The integration of Lloyd's (2010a) framework for information literacy practice

with Lave and Wenger's (1991) situated learning theory would provide a better analysis of the Kente-weaving landscape and support the research in a better way than what either theory would afford. Figure 4.4 graphically illustrates a conceptual framework that integrates information literacy practice with situated learning.

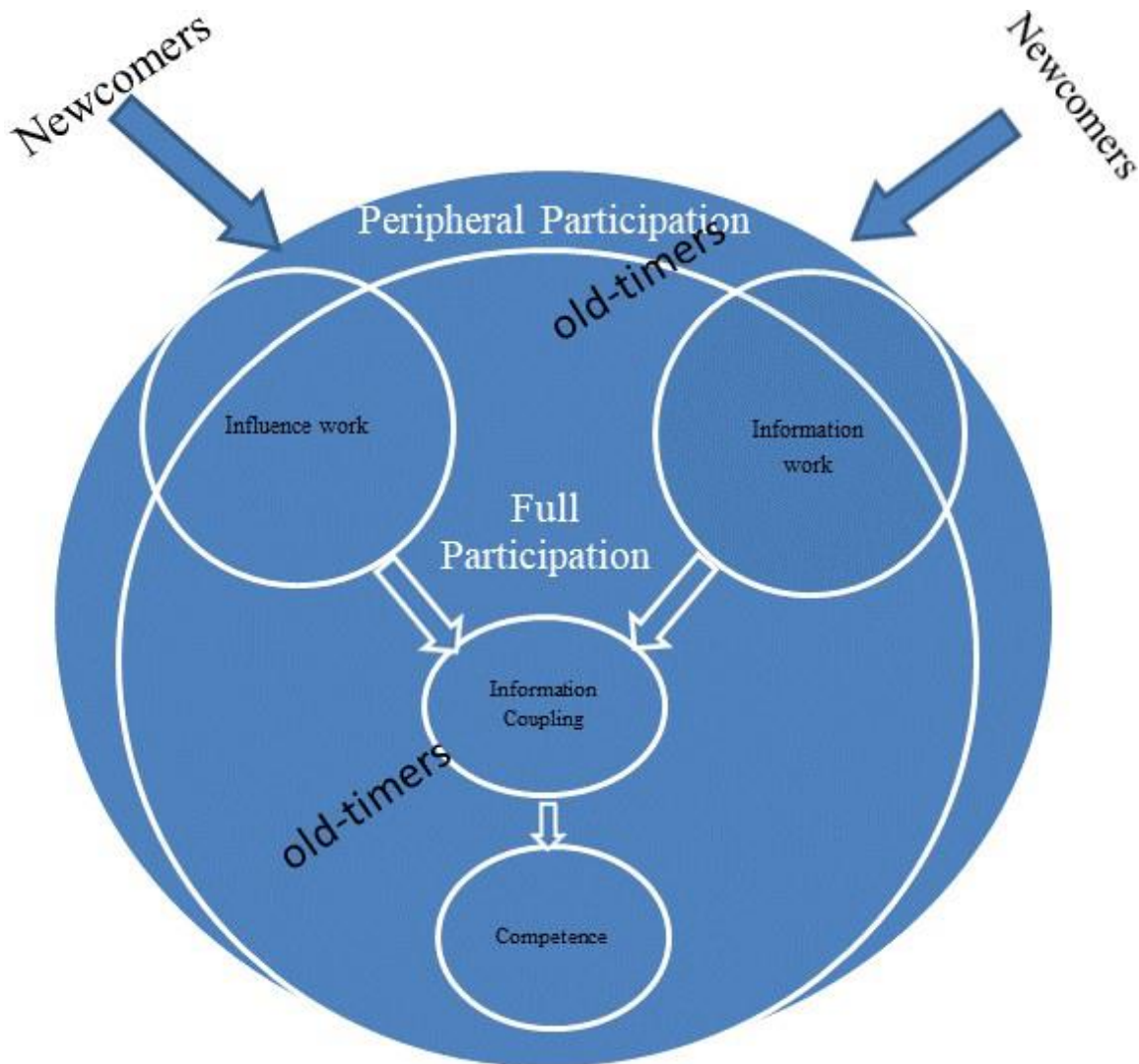


Figure 4.4: Model illustrating the integration of Lloyd's information literacy practice framework and Lave and Wenger's situated learning theory

The portions of influence and information work circles in the peripheral participation space are the empowering positions where novices commence their engagement with trajectories that head

toward full participation. The portion of influence work circle within the peripheral participation space denotes the *sayings* (i.e. explicit information) novices receive in terms of what the practice entails, its material objects (e.g. tools), and traditions, values and beliefs of the community. The portion of the information work circle within the peripheral participation space represents the *doing*-induced information, novices access in their engagement with the easy and less-rigorous activities of the community. The portion outside the influence and information work circles within the peripheral participation space is the disempowering position where novices remain at a distance and hardly engage with the relevant action to enact *knowing*. Here, novices engage in activities that have little or no bearing on their learning. Though part of the peripheral participation, their participation is marginal. The trajectories outside influence and information work circles but inside the peripheral participation circle do not head toward full participation. It reflects the notion where because of work design or power relations, novices orbit around the more experienced members and are denied access and participation in the knowledge-imparting activities that could enable the development of the ‘know-how’ of the site or community of practice. In the community, denial of access or participation could be intentional or unintentional.

The full participation space in Figure 4.4 denotes the empowering position where novices move toward more-intensive participation (i.e. engagement in more rigorous activities). The portion of the influence work circle in the full participation space represents the explicit information novices receive regarding the more comprehensive and complex activities in the community practice. The portion of the information work circle in the full participation space represents the information novices access because of their engagement in more comprehensive and complex activities in the community practice. The information-coupling circle represents the reflective and reflexive activities of bringing together the information received and accessed explicitly, experientially and relationally at both the peripheral participation and full participation levels to perform the practice of the site from start to finish. This represents the situation where novices rely on the information accessed from the periphery as well as from full participation to exhibit their ‘know-how’. The information-coupling circle explains the situation where the novices can compare their ‘know-how’ and information practice with the experienced members of the community of practice and establish a well-rounded understanding of the site. The competence

circle represents the transition for novices, who as a result of information coupling, become competent and are then able to exhibit practical knowledge (i.e. 'know-how' and can perform all the sanctioned activities) of the site coupled with the background knowledge they have acquired/learnt. Competence reflects the situation where novices develop mastery because of information coupling.

The integrated conceptual framework describes practice-learning processes. As a descriptor of a learning process, situated learning requires that newcomers move from being legitimate peripheral participants towards full participants of the site community of practice (Lave & Wenger 1991:35). As newcomers move toward full participation, they become more actively engaged with the socio-cultural practice to become competent practitioners (Lave & Wenger 1991; Isah 2012:117). Therefore, in the process of learning in the site, people (including newcomers) participate and interact with the material objects, signs, language, techniques and activities of the practice and are engaged with the sanctioned and legitimised information activities and modalities (Lloyd 2010b:20).

As people participate in a site, they learn both the *doing* (actual performance) and *saying* of the practice (Lloyd 2010b:20). The *sayings* and *doings* are inherent in both the peripheral and full participation spaces and both allow for the integration of influence work and information work. Therefore, as newcomers participate peripherally in both influence and information work, they transition or move towards the full participation of influence and information work in the site or within the community of practice.

It is essential to note that by integrating information literacy practice in situated learning theory, learning is enacted through identity formation from participation resulting from information accessed through intentional and unintentional information-sharing activities. Here, information sharing goes beyond purposeful sharing of information; it includes incidental sharing and receiving of information. The information (in whatever modalities) drawn from the participation in influence and information work in both the peripheral and full participation are 'coupled', as depicted in Figure 4.4. The information-coupling activities are reflexive and reflective activities involving the information (in whatever modalities) that have been accessed from the engagement in influence and information work at the peripheral and full participation stages. This enables the

newcomers (novices) to understand and be fully versed in the ways of *knowing* in the site, which subsequently leads to them becoming competent. In other words, they gain the ‘know-that’, ‘know-why’ and ‘know-how’ knowledge of the site community. The assumption here is that meaning making and understanding can only be derived from participating in the activities of the community of practice or site of the social activity. Becoming competent in practice is influenced by receiving information about relevant knowledge site of the community of practice (Moring & Lloyd 2013:7). Becoming competent practitioners means that the newcomers have transitioned from being novices to being competent practitioners of the site.

4.9 SUMMARY OF THE CHAPTER

Chapter 4 provides information on the conceptual framework that underpins this study. It examines Lloyd’s (2010a) framework for information literacy practice in which she conceptualises information literacy as a dispersed practice that frames the practice site. The study reviews Lloyd’s (2010a; 2011:285-292) conceptual framework, which regards information literacy as a socio-cultural information practice, which is defined as a collection of information-associated actions, doings and competencies that are inherent, sanctioned and mediated socially and materially with the view of creating a negotiated understanding about the ways of *knowing* and performing in a shared practice. This chapter also explains that as a socio-cultural information practice, information literacy focuses on the following activities: influence work, information work, information sharing and information coupling (Lloyd 2010a:253-254; Lloyd 2010c:54). Furthermore, Lave and Wenger’s (1991) situated learning theory is introduced as a practice learning theory where information literacy practice that is situated within to form the conceptual framework of this study.

To provide a comprehensive understanding of this study based on the framework already examined, Chapter 5 focuses on the fabric-weaving landscape in general, and specifically on the Kente fabric-weaving landscape.

CHAPTER 5: THE FABRIC-WEAVING LANDSCAPE

5.1 INTRODUCTION

Certain skills and knowledge are required to become a competent weaver. Therefore, it is necessary to explore the required skills and knowledge to acquire an understanding of what being information literate in a weaving context entails. The purpose of this chapter is to share information on the nature of the fabric-weaving landscape, and more specifically, the Kente-weaving landscape. As such, detailed information on the weaving environment and the topography weavers engage in is shared. This includes information on the weaving practices, tools, techniques, processes and materials of the fabric-weaving landscape.

5.2 ELEMENTS IN FABRIC-WEAVING LANDSCAPE

The importance of weaving emanates from the fact that people need clothing and clothing is a product of weaving. Weaving has evolved in many communities across the world. The evolution spans from tools, materials and designs used in weaving. The elements in the fabric-weaving landscape include the following:

- Various tools, equipment and materials that are used
- Various designs or patterns, and their meaning
- The use of colours, and their meaning
- Weaving techniques and processes
- Different types of weave.

The differences in the designs, tools and raw materials attest to the variations in weaving activities. However, the underlying technique of weaving remains similar, namely that the yarns are interlaced at right angles to each other (Amissah & Afram 2018:97-98). The basic tools and accessories used in the weaving landscape are different in shape and size depending on where the weaving practice is found. However, the tools perform the same function irrespective of the weaving landscape. An example of such a tool is the loom.

5.2.1 Tools, equipment and raw materials

Weaving involves a series of processes, raw materials, tools and equipment. These raw materials, tools and equipment are either produced by craftsmen who have the know-how in the tool and equipment making or the weavers themselves (Sabutey, 2009:93). The raw materials, tools and equipment used in the Kente-weaving landscape include those given in 5.2.1.1 to 5.2.1.11.

5.2.1.1 Loom (*Kofi Nsadua*)³

The loom is the principal tool used in weaving (Lartey 2014:35; Stankard 2015:225; Boateng 2018:2; Hwang & Huang 2019:14-15). Different types of looms are used in weaving (Stankard 2015:225; Pärson & Sundström 2021:98). The differences in the types of loom appear in sizes and shapes (Lartey 2014:35). The basic function of a loom is to hold fast the warp yarns (threads) to enable interlacing of the yarns (threads) (Stankard 2015:225; Boateng 2018:2). Figure 5.1 shows two male Kente weavers using a wooden looms with the researcher sitting in the middle.



Figure 5.1: The researcher in the middle of two weavers in wooden looms

³ *Kofi Nsadua* is the *Twi* (local language) name given to the loom.

Source: Researcher.

Figure 5.2 shows a drawing of the parts of the loom. These parts are described in more detail below.

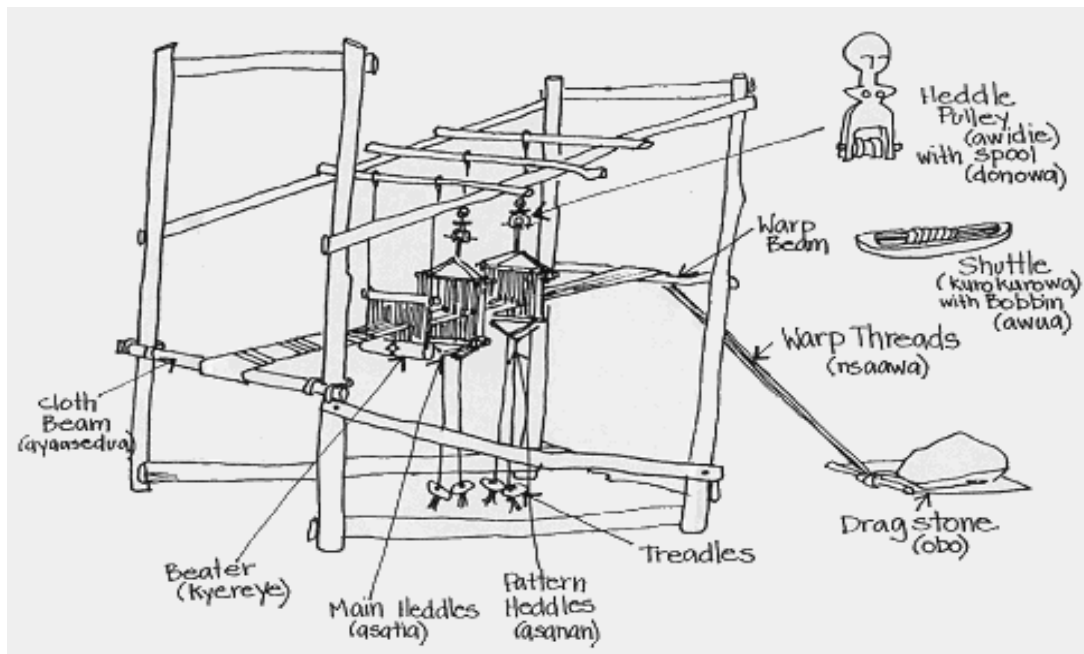


Figure 5.2: Parts of the loom

Source: Meyer, L (n.d).

5.2.1.2 Heddles or healds (*asa*⁴)

The heddle has an ‘eye’ that separates or enables warp threads used in weaving to pass. Figure 5.3 shows the heddle, which is fixed on a loom.

⁴ *Asa* is the *Twi* name for the heddles.



Figure 5.3: Heddle

Source: Boateng 2018:4.

5.2.1.3 Pulleys (*awidee*⁵)

The pulley is a wheel-like tool with a string that holds the heddle to make its lifting easier. The shape of the pulley can differ from loom to loom (Boateng, 2018:4). Figure 5.4 shows a type of pulley used in the Kente-weaving landscape.



Figure 5.4: Pulley

Source: Boateng 2018:5.

⁵ *Awidee* is the *Twi* name given to the pulley.

5.2.1.4 Bobbins (*awua or duaduwa*⁶)

The bobbins are sticks usually made of bamboo on which threads are wrapped (Amissah & Afram, 2018:103; Boateng, 2018:5). Figure 5.5 shows a sample of bobbins in the Kente-weaving landscape.



Figure 5.5: Two bobbins with one wrapped with yarns

Source: Researcher.

5.2.1.5 Shuttles (*kurokurowa*⁷)

Shuttles are made in different shapes and lengths. The shuttle is a boat-shaped wooden device with a cavity for holding the bobbin. The ‘eye’ of the shuttle is where the weft yarns pass through (Lartey 2014:8). Figure 5.6 shows samples of shuttles used in the Kente-weaving landscape.

⁶ *Awua or Duaduwa* in *Twi* refers to the bobbins.

⁷ *Kurokurowa* in *Twi* refers to the shuttle.



Figure 5:6: Two shuttles with one inserted with yarns-wrapped bobbins ready as the weft

Source: Researcher.

5.2.1.6 Reeds or beaters (*kyeree*⁸)

The reed is a comb-like tool made up of wood and strips of raffia palm threads. The lining of the strips in the reed creates dents or narrow spaces through which the warp thread passes. The reed is used for creating spaces in between the warp threads (Amissah & Afram 2018:103; Boateng 2018:6). The reed is also used to keep the weft threads compact to each other by pushing or beating them down. Figure 5.7 shows a sample of reed.

⁸ The reed or beater is known in *Twi* as the *Kyeree*.



Figure 5:7: Reed

Source: Sabutey 2009:100.

5.2.1.7 Skein winder or skeiner (*Frefre*)

The skein winder is a fan-shaped wooden structure with four bobbins on it that is used for folding or wrapping yarns or threads on a bobbin. Figure 5.8 shows a sample of a skein winder.



Figure 5:8: Skein winder or skeiner

Source: Sabutey 2009:97.

5.2.1.8 Swordstick or spatula (*tabono*⁹)

The swordstick is used to sustain a shed when making a design or pattern during weaving (Amissah & Afram 2018:106). Figure 5.9 shows a sample of a swordstick.



Figure 5.9: Swordstick

Source: Researcher.

5.2.1.9 Treadles (*ntiamu*¹⁰)

Just like the loom, treadles appear in different shapes and sizes. The treadles are attached to the heddles. Treadles are used for shedding during the weaving process (Amissah & Afram 2018:106). Figure 5.10 depicts a type of treadle in the Kente-weaving landscape.

⁹ *Tabono* refers to the swordstick or spatula in *Twi*.

¹⁰ The treadles are called *Ntiamu* in *Twi*.



Figure 5.10: A weaver's feet on the treadles

Source: Researcher.

5.2.1.10 Bobbin winder (*Afidie a, yede bobɔ ahoma*¹¹)

A bobbin winder is used for wrapping (winding) yarn onto bobbins. Figure 5.11 shows a bobbin winder.



Figure 5.11: Bobbin winder

Source: Researcher.

¹¹*Afidie a, yede bobɔ ahoma* refers to bobbin winder in *Twi*

5.2.1.11 Yarns (*Ahoma*¹²)

The yarns are the raw materials used for weaving. The yarns can be silk, rayon or cotton. However, Sabutey (2009:106) observes that the Kente weavers mostly use rayon yarn for double, triple and colourful weaves because of its softness. Cotton yarn on the other hand is preferred for single and plain weave because of its durability (Sabutey 2009:106). Figures 5.12-5.14 show samples of yarns.



Figure 5.12: Silk yarn
Source: Sabutey 2009:102.



Figure 5.13: Rayon yarns on cones/bobbins
Source: Researcher.



Figure 5.14: Cotton yarns on cones
Source: Researcher.

¹² *Ahoma* refers to yarns in *Twi*

5.2.2 Symbolic meaning of colour

Custom or individual weavers' aesthetic taste dictates the colour choice for the warp or weft designs (Sabutey 2009:112). In the Kente-weaving landscape, there are symbolic meanings associated with every colour.

- The colour yellow symbolises preciousness, prosperity, royalty, fertility, wealth, spirituality and vitality (Sabutey 2009:114; Kodzo 2017:9).
- The colour pink signifies feminine qualities such as tenderness, calmness, mildness, pleasantness, and sweetness (Sabutey 2009:114; Kodzo 2017:10).
- The colour red is associated with death, funerals, mourning, and senses of seriousness or aggression (Sabutey 2009:115; Kodzo 2017:10).
- The colour blue is related to the sky, the dwelling of God. It is used in varied ways to symbolise peace, togetherness, good fortune, love and harmony-related ideas (Sabutey 2009:115; Kodzo 2017:9).
- The colour green is used to signify vegetation (land, crop) planting and harvesting. Green is also associated with fertility, prosperity, growth, fruitfulness, good health and spiritual renewal (Sabutey 2009:115; Kodzo 2017:9).
- Both purple and maroon colours are associated with the earth and therefore used to represent the feminine aspects of life (Sabutey 2009:115; Kodzo 2017:10).
- Silver is associated with the moon to represent purity, joy and peace. Kente fabrics made with silver yarns or threads are worn during outdoorings, a traditional ceremony in which parents introduce their newborn babies to the outside world for the first time and officially name them. This occurs in the presence of extended family members and friends. This traditional ceremony is usually done for the first child of the parents (Sabutey 2009:116; Kodzo 2017:10).
- The gold colour is associated with the precious mineral (gold dust and gold nuggets). The gold colour symbolises social prestige such as wealth, royalty, elegance, glory, spiritual purity and high status (Sabutey 2009:117; Kodzo 2017:10).

- The colour black is associated with the interaction with the ancestral spirits, antiquity, spiritual potency or maturity (Sabutey 2009:117; Kodzo 2017:10). Like the colour red, black is also used to signify mourning (Kodzo 2017:9).

The designs and the intended meaning or the occasion for which the fabric will be worn will determine the colours that are used. The colours are also used in different combinations.

5.2.3 Weaving patterns

Numerous patterns (motifs) are hand-designed on Kente cloth during the weaving process. According to Sabutey (2009:112) and Kodzo (2017:11), researchers have identified over three hundred patterns. Each woven fabric as well as the embedded patterns has a name and meaning which is derived from proverbial and philosophical thoughts, oral literature, moral values as well as the community's social code of conduct (Sabutey 2009:3; Boateng 2015). The meaning of patterns is also derived from past events, individual achievements and certain traits and attributes of other living things such as animal and plant life (Sabutey 2009:3). The patterns reflect objects whose meaning is underpinned by geometric abstractions (Sabutey 2009:112). However, Sabutey (2009:112) observes that sometimes some of the patterns have no similarities with the purported concepts or objects they are symbolising. According to Sabutey (2009:112), in such instances, the relationship between the pattern and its meaning is conceptual rather than representational. Depending on the occasion, these Kente-patterned and coloured cloths are worn to communicate the message that fits the occasion (e.g. wedding, funeral, outdooing). Figures 5.15-5.24 show examples of popular woven Kente fabrics and the embedded patterns.

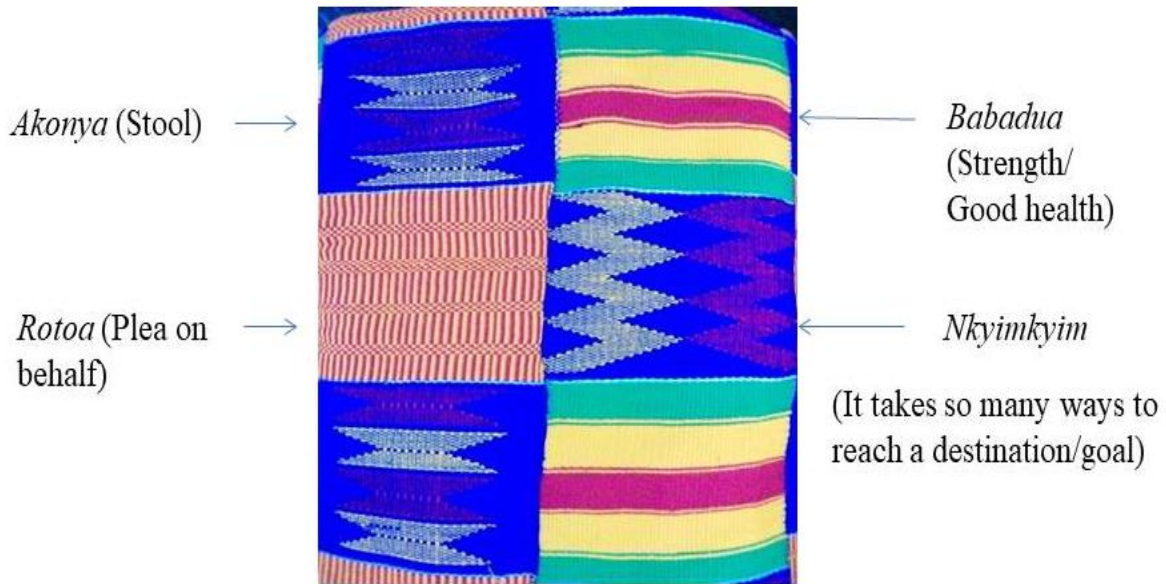


Figure 5.15: *Abusua ye dom* (Family is a crowd) fabric with the embedded patterns and their meaning

Source: Researcher

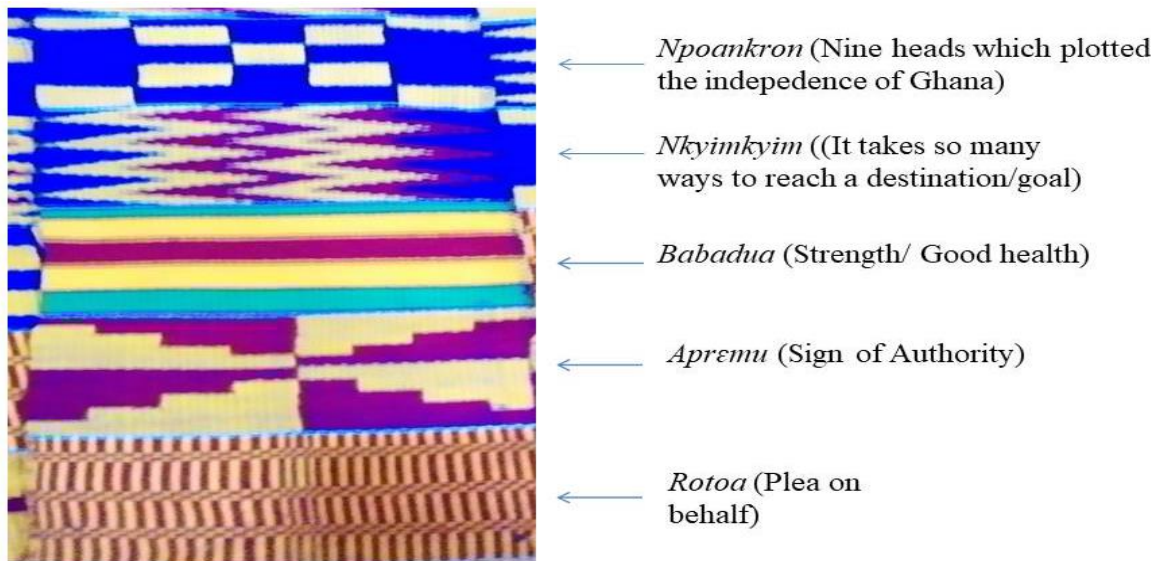


Figure 5.16: *Fatia fata Nkrumah* (*Fatia matches Nkrumah*) fabric with the embedded patterns and their meaning

Source: Researcher.

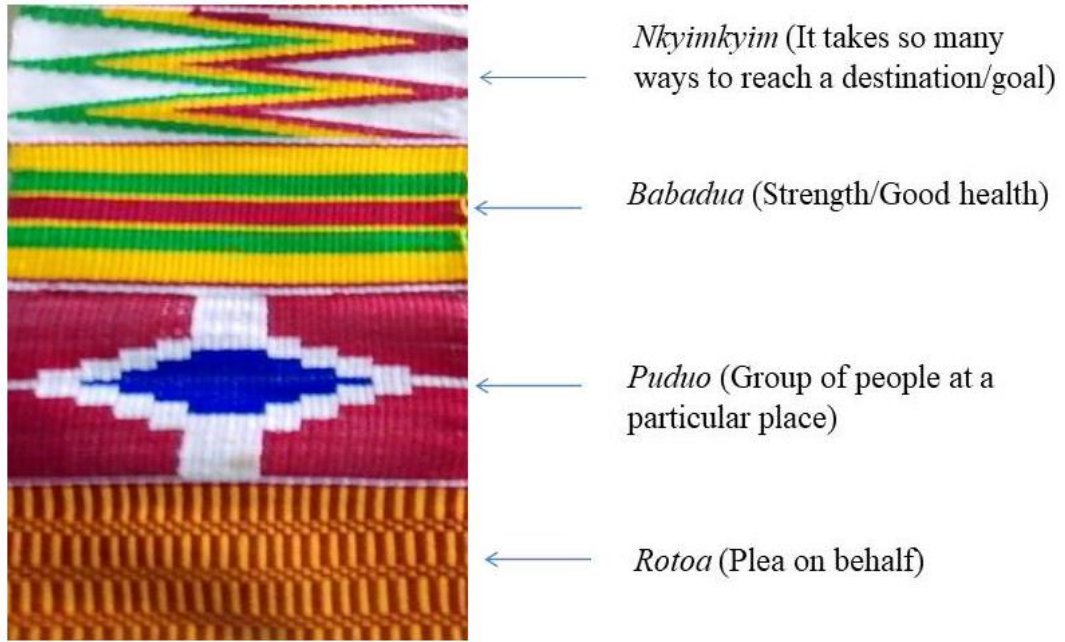


Figure 5.17: *Wo sin wo yonko a wotaa wo* (Your colleagues hate you when you perform better than them) fabric with the embedded patterns and their meaning

Source: Researcher.



Figure 5.18: *Nyame akwan* (God's ways) fabric with the embedded patterns and their meaning

Source: Researcher.

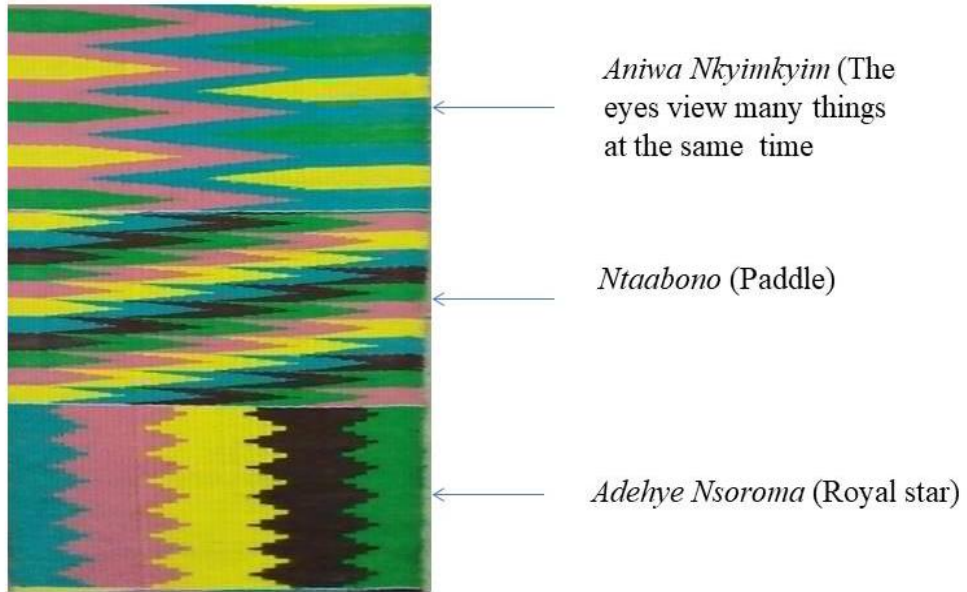


Figure 5.19 *Adwini si adwini so* (Pattern upon pattern) fabric with the embedded patterns and their meaning

Source: Researcher.

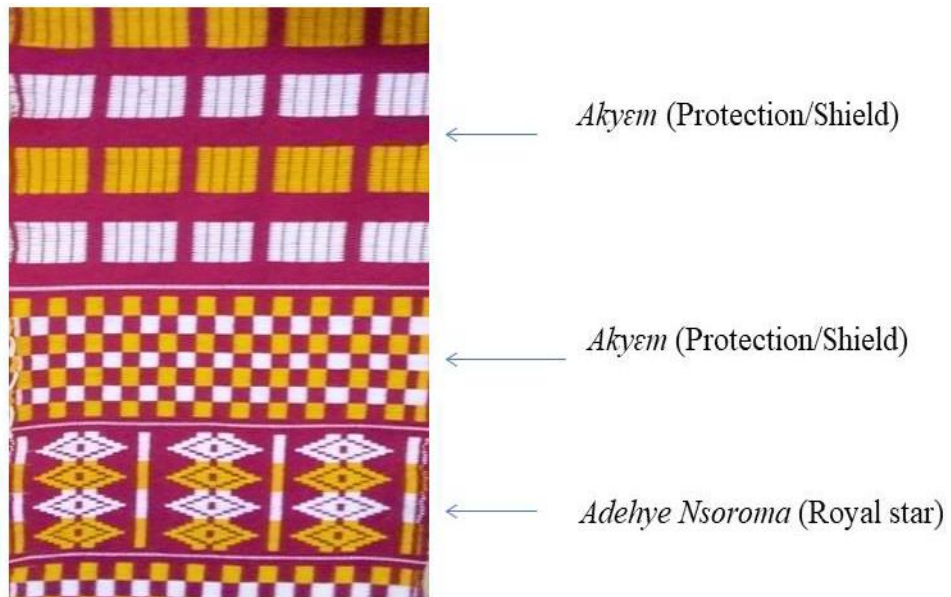


Figure 5.20: *Emerepa da w'anim* (There are good days ahead) fabric with the embedded patterns and their meaning

Source: Researcher.

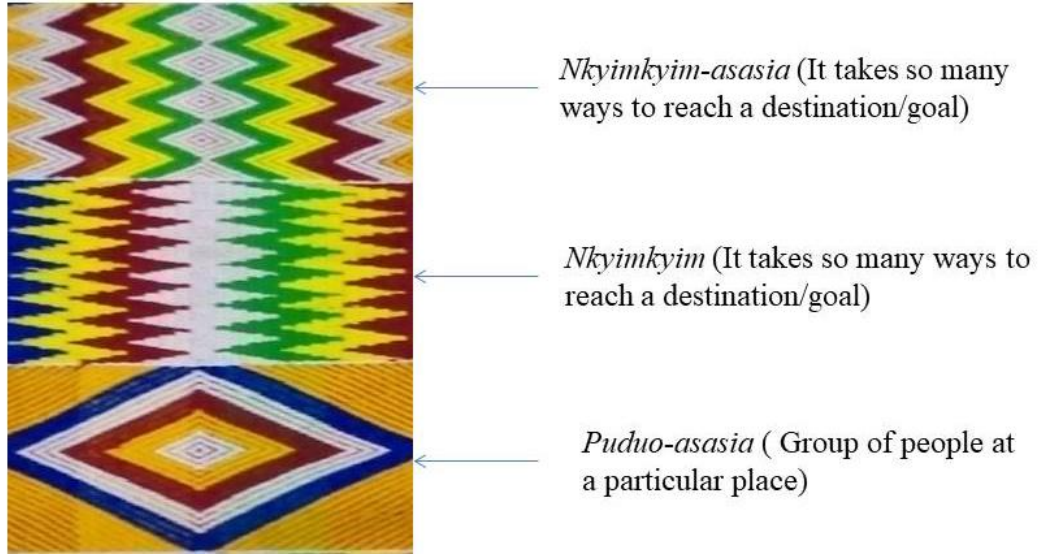


Figure 5.21: *Asasia* (Six heddles) fabric with the embedded patterns and their meaning

Source: Researcher.

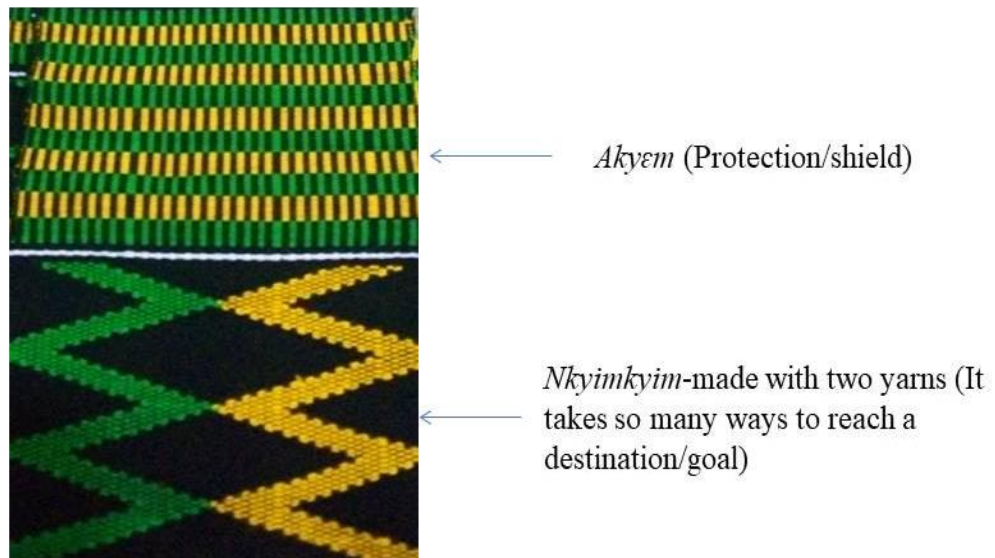


Figure 5.22: *Epieakye* (There is no contention to what intellectuals say) fabric with the embedded patterns and their meaning

Source: Researcher.

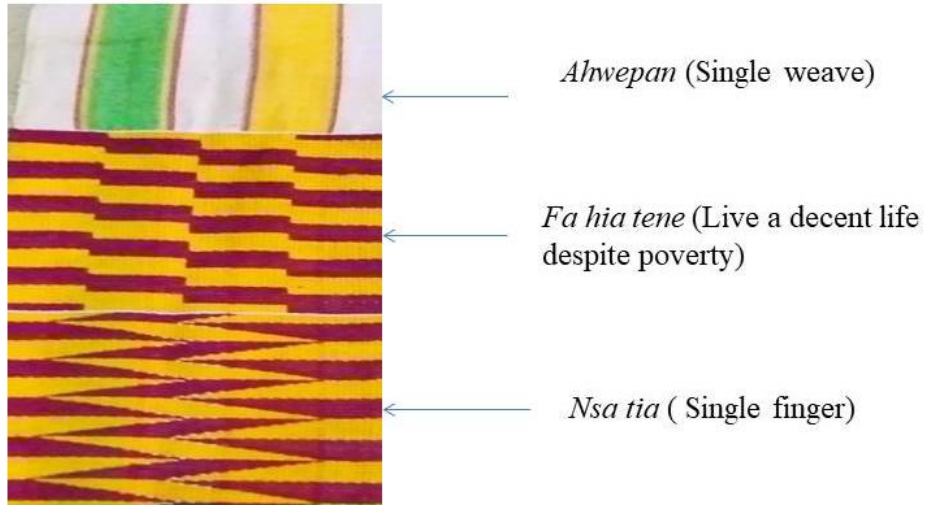


Figure 5.23: *Torku kra ntoma* (Torku’s soul’s fabric) fabric with the embedded patterns and their meaning

Source: Researcher.

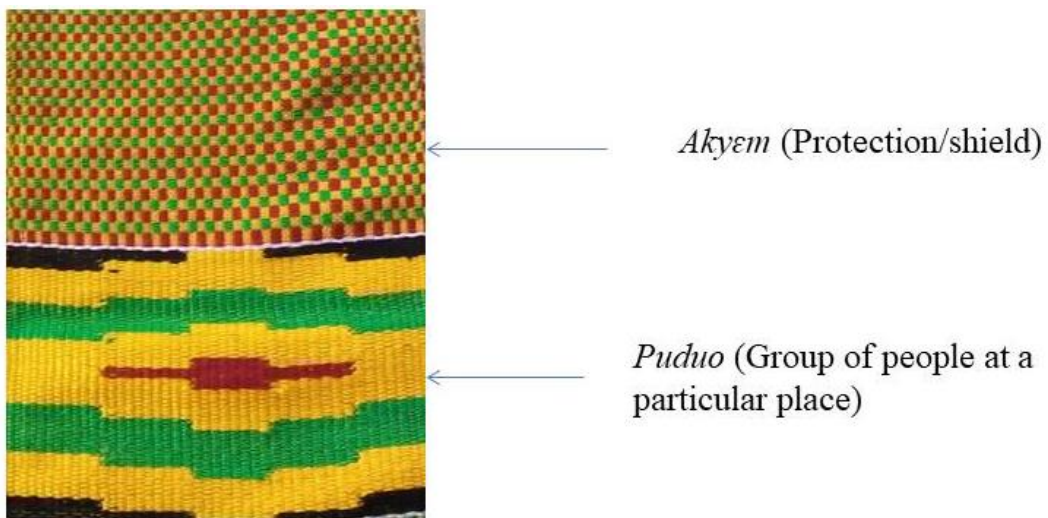


Figure 5.24: *Sika futuro* (Gold dust) fabric with the embedded patterns and their meaning

Source: Researcher.

5.2.4 Weaving processes and terminology

Kente weaving starts with the design (Adom 2016; Amissah & Afram 2018:98). This involves deciding on the length, width, number of strips, pattern and colours of the warp and weft of the desired Kente cloth. While Amissah and Afram (2018:98) maintain that this is a mental process, Adom (2016) observes that designing is done graphically on a square paper. Once the design is completed, the weaver prepares the warp. According to Adom (2016) and Amissah and Afram (2016), warp preparation begins when the weaver wraps the warp yarns on bobbins. This process is demonstrated in figure 5.25.



Figure 5.25: The researcher wrapping the warp yarns on a bobbin

Source: Researcher.

After wrapping the warp yarns on the bobbins, the bobbins are placed on the bobbins carrier. It is worthy noting that these days, the yarns are made on cones and therefore weavers do not have to wrap the warp yarns on bobbins. Weavers just have to place the cones on the cones carrier as shown in figure 5.26. The figure shows wooden or metallic pegs inserted into the ground and then used to stretch the wrapped-warp yarns. According to Sabutey (2009:108), the stretching of

the warp yarns involves some mathematical activities to get the desired length and number of ends.

This process is called warping (Adom 2016; Amissah & Afram 2018:98). According to Amissah and Afram (2018:98), the weaver provides for shrinkage and unpredicted wastage when they warp yarns by keeping the warp yarn a little longer than the exact desired length.



Figure 5.26: A weaver warping

Source: Amissah & Afram 2018:99.

After warping, the warps are arranged and the ends of the warp yarns are passed through the ‘eye’ of the heddle as demonstrated in figure 5.27.



Figure 5.27: The researcher performing heddling process/technique in a set of two-heddle frames

Source: Researcher.

This process is called heddling or healdling (Amissah & Afram 2018:99; Sabutey 2009:108). There are sets of two, four and six heddle frames.

The two-set arrangement is known as short heddles (*asatia*), the four-set arrangement is known as *asanan* and the six-set heddle arrangement is known as *asasia* (Sabutey 2009:93; Adom 2016; Amissah & Afram 2018:99). Heddling depends on the pattern or design to be woven (Adom 2016). The short heddles are used for plain weaving while four heddles are used when weaving designs or patterns (Amissah & Afram 2018:99).

Heddling is followed by reeding. As demonstrated in figure 5.28, the weaver then passes the heddlled warp ends through the dents of the reed, which are the narrow spaces created by the strips of the reed through which the warp yarns (threads) pass. This is done per the width of the intended cloth to be woven (Adom 2016; Amissah & Afram 2018:99-100). According to Adom (2016), more than one warp-yarn end can be passed through one dent in the reed depending on

the desired compactness of the fabric. A stick is used to pass the warp ends through the dents of the reed (Amissah & Afram 2018:100).



Figure 5.28: The researcher performing the reeding process/technique

Source: Researcher.

Reeding is followed by tying-up. Tying-up is when the weaver connects the warp yarns to the cloth beam (roller) or drag weight. The tying-up process is demonstrated in figures 5.29 and 5.30.



Figure 5.29: Drag weight

Source: Amissah & Afram 2018:106.



Figure 5.30: A weaver performing a tying-up technique

Source: Amissah & Afram 2018:100.

The purpose of the cloth roller or drag weight in the loom is to enable tight positioning of the warp to avoid it being drawn away (Adom 2016; Amissah & Afram 2018:100). This is done by rolling or dragging to stretch the warp yarn to ensure the right tension in the loom (Adom 2016; Amissah & Afram 2018:100). The warp ends are then knotted to a stick-like device in the loom (Amissah & Afram 2018:100). Figure 5.30 demonstrates a tying-up technique. Tying-up also involves hanging the heddles and reed on the pulley at the top of the loom (Amissah & Afram 2018:100). The heddle frames are then fixed to the treadle (a paddle underneath the loom) to shed (Adom 2016). Shedding is the process or technique of creating an opening of the warp through which the shuttle passes by the movement of the treadle that raises and lowers the warp yarns (Adom 2016).

The weft preparation then follows the tying-up process (Adom 2016; Amissah & Afram 2018:100). Amissah and Afram (2018:100) observe that in weft preparation, yarns are wound on a skein and then on a spool rack onto a bobbin with the aid of a bobbin winder as demonstrated in Figure 5.25. According to Amissah and Afram (2018:101), two sets of weft yarns are prepared, one for the shuttle for binding and the other for designing patterns. A thicker weft is prepared by arranging yarns together if the weft is meant for designing patterns. The thickness of the weft depends on the weight and desired design to be woven (Amissah & Afram 2018:101).

According to Amissah and Afram (2018:101), and Adom (2016) the actual weaving process begins after the warp and weft preparation. The weaving process involves pressing down and releasing the treadles repeatedly, and alternatively using the right and left feet to create a shed as shown in Figure 5.10. The weft loaded in a shuttle is then pushed through the shed (Fiadzo 2010:16; Adom 2016; Amissah & Afram 2018:101). This process of repeatedly throwing the shuttle loaded with bobbins through the shed is called picking (Fiadzo 2010:16; Adom 2016; Amissah & Afram 2018:101). After each picking round, the newly inserted weft yarn is pushed by the reed to the end of the cloth (Adom 2016; Amissah & Afram 2018:101). The process of using the reed to push the newly inserted weft yarn to attain compactness is called beating up (Fiadzo 2010:16; Adom 2016). Both the picking and beating-up techniques are shown in Figure 5.31.



Figure 5.31: A weaver performing the picking and beating up techniques

Source: Sabutey 2009:111.

During plain weaving, only a shuttle meant for weft is used (Amissah & Afram 2018:101). According to Amissah and Afram (2018:107), it takes a maximum of four (4) weeks to weave a simple weave and a maximum of six (6) months to weave complex patterns or designs.

5.2.5 Types of weave

As illustrated in section 5.2.4, weaving involves knotting warp and weft yarns vertically and horizontally. There are different types of weave in the weaving landscape (Narzary 2017:14-16; Stankard 2015:271-279). Researchers such as Sabutey (2009) identify three main types of Kente weaving. They are single weave (*ahwipan*), double weave (*ahwiprenu*) and triple weave (Sabutey 2009:117-119; Boateng 2018:9). The three types of weaving are described in 5.2.5.1 to 5.2.5.3.

5.2.5.1 Single weave

The single weave is the weaving technique where a single pair of heddles (*asatia*) is used when weaving. The single pair of heddles are used to produce a raw or plain weave with no design or simple design. The single weave is the very first weaving technique novices are introduced to when they learn how to weave. According to Sabutey (2009:106), cotton is the desirable yarn for a single weave. This could be woven by using only one or varied colours of yarns to make the cloth appear pleasing (Sabutey 2009:117-119). Figures 5.32 and 5.33 depict the single-weave technique and a sample of single-weave Kente cloth, respectively.



Figure 5.32: Single weave technique

Source: Researcher.



Figure 5.33: Single weave Kente cloth

Source: Sabutey 2009:118.

5.2.5.2 Double weave

The double weave is the weaving technique where double pairs of heddle (*asanan*) are used. In this weaving technique, the first pair of heddles are used for the raw or plain weave while the second pair is for the design (pattern). Thus the double weave technique is applied when the weaver wants to have a design or pattern on his cloth. Figures 5.34 and 5.35 depict the double-weave technique and a sample of a double-weave Kente cloth, respectively.



Figure 5.34: A weaver performing the double weave technique

Source: Researcher.



Figure 5.35: Double weave Kente cloth

Source: Sabutey 2009:118.

5.2.5.3 Triple weave

The triple weave is a weaving technique where triple pairs of heddle (*asasia*) are used when weaving. The triple weaving technique is similar to the double weave technique except that an additional pair of heddles are used which then allows for the creation of more designs. Thus, the triple weave technique is applied when the weaver wants to mount designs upon designs in his cloth. According to Sabutey (2009:272), the triple weave is the most complicated Kente-weaving technique. They are mostly applied to weave expensive Kente cloth for dignitaries such as kings, chiefs and heads of state (Sabutey 2009:272). According to Sabutey (2009:86), triple-weave Kente cloth is very heavy and full of intricate designs. Due to the intricacy of the design, triple-weave cloths take several weeks or months to weave. The required period to complete the cloth depends on the weaver's knowledge (Sabutey 2009:86). Figures 5.36 and 5.37 depict the triple weave technique and sample triple weave Kente cloth, respectively.



Figure 5.36: Triple weave technique

Source: Researcher.



Figure 5.37: Triple Weave

Source: Sabutey 2009:118.

5.3 REFLECTION AND APPRAISAL OF THE CHAPTER

The use of pictures in the description of the context of the Kente-weaving landscape provides additional information to aid in understanding the nature of the tools, patterns and how some weaving practices are performed. The pictures of the tools and the performances of the weaving practices help provide a concrete understanding of what the weavers are involved in and the kind of knowledge sanctioned in the Kente-weaving landscape.

The description of the context of the fabric-weaving landscape with much focus on the Kente-weaving landscape suggests what is considered as knowledge and knowledgeable actions by the community of weavers. The performance of the processes and the weaving practices to weave Kente fabric is discussed to show the practical knowledge required to become a competent weaver. This has aided in the knowledge of some of the terminologies used in the fabric-weaving landscape in general.

The practices of weaving a fabric indicate the skills and knowledge required to become a competent weaver in the weaving context. The tools and materials of the landscape describe how

indigenous the context of the Kente-weaving landscape is. The context shows that know-how can only be attained by participation in the practices of the Kente-weaving landscape. The practicality of the integrative practices of warping, heddling, reeding, tying-up, picking and pattern making suggest that know-how can only be developed by participation and interaction with the practitioners (weavers) of the Kente-weaving landscape. The complexities in weaving the different types of weave underscore the need to develop insight and understanding both theoretically and practically to become a competent weaver of the Kente-weaving landscape.

The proverbial and philosophical thoughts, moral values and societal code of conduct that underpin the meanings of the colours, the names of the fabric as well as the embedded patterns show the influence of tradition over the craft. Hence knowledge of the tradition is critical to becoming competent in the craft.

5.4 SUMMARY OF THE CHAPTER

The chapter describes the elements of the Kente-weaving landscape. Much detailed information on the tools, materials, patterns, the use of colour, weaving terminology and processes as well as the types of weave with supported pictures have been provided to aid in understanding the context of the Kente-weaving landscape. The tools and materials and what they are used for are described. In terms of the colours and patterns, these two issues are noted:

- Though an individual weaver's aesthetic taste dictates the colour choice, there are symbolic meanings associated with the use of every colour.
- There is either conceptual or representational meaning derived from proverbial and philosophical thought or societal code of conduct for each Kente pattern (Sabutey 2009; Boateng 2015).

It is noted that depending on the occasion, these Kente-patterned and coloured cloths are worn to communicate the message that fits the occasion for which it is worn (Sabutey 2009; Boateng 2015).

The chapter shows that Kente weaving is a process that involves performing the integrative practices of the Kente-weaving landscape. Understanding the processes/practices involved in weaving Kente fabric enables comprehension of the knowledge and skills required to be information literate in the Kente-weaving landscape.

With the empirical component in mind, it is important to explain the methodology pertaining to data collection in the Kente-weaving landscape. Chapter 6 provides the research methodology of this study.

CHAPTER 6: RESEARCH METHODOLOGY

6.1 INTRODUCTION

As stated in Chapter 1, the purpose of this study is to explore how becoming competent weavers in the fabric-weaving landscape is enabled by information literacy practice. Chapters 2, 3 and 4 investigate how knowing and becoming competent are aligned and underpinned by the research theory and literature. Chapter 5 describes the core context and setting of the study and the weavers and weaving landscape of the Bonwire Kente Centre in Ghana.

Chapter 6 continues the empirical research journey commenced in Chapter 5 and presents the research philosophy, research approach, research design, data collection and analysis procedure used to collect and interpret the data for this study. This study examines information literacy practice within the field of information science. Therefore, the choice for the selection of the type of research philosophy, research approach, research design and data collection and analysis procedure include those that correspond with the information practice assumption and the theoretical frame of practice.

6.2 RESEARCH PHILOSOPHY: SOCIAL CONSTRUCTIVISM

Research philosophy is an assumption and belief system that relates to the development of knowledge (Saunders, Lewis & Thornhill 2019:130). Depending on the assumptions, research philosophy can be classified under one of the following: postpositivism, pragmatism, postmodern perspectives, transformative or social constructivism (Creswell & Creswell 2018:43; Creswell & Poth 2018:50). Social constructivism, closely related to interpretivism assumes that knowing and shared meaning are constructed through interaction in a social context (Denzin & Lincoln 2011:12; Mertens 2015:32). Social constructivists believe that individuals seek understanding of the world through meaning making of the experiences in their daily lives (Creswell & Creswell 2018:44; Creswell & Poth 2018:60). They assume that construction of meaning is imprinted on individuals but forged through interaction with others with regard to the cultural and historical norms of the society the individuals operate in (Creswell & Creswell

2018:44; Creswell & Poth 2018:60). They suggest that in a social group, people get to know or gain knowledge and cognitive representations of each other's actions, which subsequently leads to habitual and reciprocal interactions in the society (Berger & Luckmann 1966:177-178).

A range of information science researchers has been inspired to adopt the social constructivist philosophy in information science research, especially within the areas of information behaviour and information practice (Leith 2018:12). Examples of such research studies are Talja (2010), Olsson (2016a; 2016b), Olsson and Lloyd (2017a), Lloyd and Olsson (2019). The social constructivism philosophy was influential in the celebrated works of Lave (1988), and Lave and Wenger (1991) as far as *knowing* in a community of practice is concerned. Based on this, Talja (2010:206) points out that "knowledgeability" can be attained in an activity setting within a community of practice. Therefore, at the workplace, searching, sharing and interpreting information that are done by participants in a practice evolves over time within the community of practice (Talja & Hansen 2006:127-129).

In this study, the researcher adopts social constructivism as the researcher philosophy. This adoption is premised on the ground that social constructivism assumes that knowledge creation is done within and emerges from the social and contextual nature of the workplace (Berger & Luckmann 1966:177-178; Leith 2018:12). This assumption provides an analytical lens from which to view information literacy or *knowing* the Kente-weaving landscape as a social process whereby accessing information and knowledge involve engagement with the people of the landscape. This social view of information literacy or *knowing* is in direct contrast to the cognitivist notion of Kente knowledge residing only in the weavers' minds.

6.3 RESEARCH APPROACH: THE QUALITATIVE APPROACH

A research approach according to Creswell and Creswell (2018:39), could either be quantitative, qualitative or a combination of both approaches. Creswell and Creswell (2018:38) explain that the nature of the research problem, the issue being addressed, or the audience for the study determines which approach to employ. Creswell and Creswell (2018:39), define a qualitative research approach as the study of a social or human problem by seeking meaning from groups or

individuals through a specific philosophy or assumption (Creswell 2007:37; Creswell & Creswell 2018:39). Drawing on the ideas from 89 sources, Aspers and Corte (2019:155) define the qualitative research approach as an iterative process used to provide improved understanding to a scientific scholarly community through the making of new significant distinctions emanating from a closer connection to the phenomenon studied. The qualitative research approach as defined by Aspers and Corte (2019:151-155) constitutes two criteria, namely how to do things and the outcome. They provide the following explanation for the two criteria:

- (i) How to do things – generating or analysing empirical material through an iterative process in which one gets closer by making new distinctions. They assert that making a new distinction could be of any phenomenon including, coining new concepts or discovering new knowledge through getting closer to the data, for example, pictures, text or human interaction. Unlike the quantitative approach, the qualitative approach does not convert its materials to numbers or variables. According to them, doing so would make the iterative process come to a halt as it gets the researcher away from the data, and therefore makes it impossible to make new distinctions for improved understanding.
- (ii) Outcome – improved understanding means the provision of knowledge of something unknown to the scholarly community. They assert that identifying the correlation or causal relation, as noted in numerous quantitative research projects, it is not enough, but rather the developing of understanding, which is a key condition for the qualitative approach.

Aspers and Corte's (2019:155) understanding of the qualitative approach is supported by Punch (2013). Punch (2013) explains that a qualitative research approach is an approach that collects and works with non-statistical or non-numerical data to interpret and make meaning from the data to understand the social life of a targeted population of a place. In this sense, as also noted by Walia (2015:1), the qualitative research approach focuses on words instead of numbers to interpret or make meaning to understand the targeted people. Against this backdrop, Mohajan (2018:24) observes that a qualitative research approach adopts an exploratory approach that

seeks to explain ‘how’ and ‘why’ a specific social phenomenon operates the way it does. He explains that the qualitative approach is used to explore the experiences, perspectives, feelings and behaviour of people in the course of their lives.

Creswell and Poth (2018:84-85) delineate when the qualitative research approach can be used. This includes but is not limited to

- When a researcher wants to explore an issue.
- When a researcher needs a detailed understanding of complex issues.
- When a researcher wants to understand how participants address a problem or an issue in a setting or context.
- When quantitative or statistical measures do not fit the problem.

According to Steinerova (2018:87-88), the qualitative research approach is framed particularly by the kind of research problem and questions which are aimed at understanding the information behaviour or literacy practice context. She provides the specific objective for employing the qualitative approach in information literacy practice (Steinerova 2018:87-88). In her discussion of the qualitative approach in information science, she observes that the qualitative research approach is adopted when the objectives are to identify the causes of a phenomenon or attain deeper insight into the information literacy practice of people. She explains that research of information literacy practice is typically driven by the qualitative approach regardless of the landscape, education, community or workplace (Steinerova 2018:87-88). From the literature, it is observed that all the studies that adopted a socio-cultural approach to understanding information literacy are qualitative (e.g. Sundin & Francke 2009; Sundin, Francke & Limberg 2011; Olsson 2016a; Olsson & Lloyd 2017a; Lloyd & Olsson 2019; Lloyd & Hicks 2021).

In line with the literature, this study adopts a qualitative approach to investigate the information literacy practice in the fabric-weaving landscape, specifically the Kente-weaving landscape. The overall objective of this study is therefore in line with Steinerova’s (2018:88) point of when the qualitative approach can be applied in the research of information literacy practice. Also, this study meets Creswell and Poth’s criteria for when it is appropriate to use the qualitative approach

as it is an exploratory study and seeks to ascertain the details on how Kente weavers know what they know and how what they know is underpinned by information literacy practice. The researcher needs a detailed understanding of the complex issue of Kente weaving. This issue cannot be addressed through quantitative measures. For example, the interaction among people and material objects in the Kente-weaving landscape would be difficult if not impossible to be captured by statistical measures. It is based on this foregone conclusion that the qualitative approach has been deemed appropriate for this study.

6.4 RESEARCH DESIGN: ETHNOGRAPHY

Research design is referred to as the plan the researcher follows to conduct the research. According to Kothari (2004:31) and Babbie (2005:87), it involves deciding on what, why, where and how the research will be conducted. Creswell and Creswell (2018:47) perceive research design as a type of inquiry within three main research approaches (i.e. qualitative, quantitative and mixed approaches) that provide specific procedural direction in a research study. Within the qualitative approach, it involves collecting data from the natural location of the people and analysing the data inductively through the use of either one of these research designs: Narrative research, grounded theory, case study, phenomenology or ethnography (Creswell & Creswell 2018:39; Creswell & Poth 2018:37).

Ethnography is described as a ‘formal description of foreign people, their habits and customs’ (Almagor & Skinner 2013:2). It is a qualitative design of inquiry emanating from the field of sociology and anthropology in which the researcher describes and interprets the shared patterns of behaviour, actions, values, beliefs and language of an intact culture-sharing group in its natural site over a prolonged time (Harris 1968; Creswell & Creswell 2018:48). Culture here is defined as the sum of the observable patterns of behaviour, customs and way of living of a social group (Harris 1968:16). The focus in ethnography is on understanding and describing the social activities among people through acceptable membership to that particular culture-sharing group (Van Maanen 2014:43 & Leith 2018:37).

Researchers from the field of public health, medicine, nursing, business and information science have undertaken ethnography, as a research design (Leith 2018:37). In information science, especially in the area of information literacy practice, various researchers have conducted ethnographical studies (e.g. Sundin & Francke 2009; Sundin, Francke & Limberg 2011; Pilerot 2014a; Pilerot 2014b; Pilerot & Lindberg 2018; Lloyd & Olsson 2019). According to Pilerot and Lindberg (2018:257), ethnography is employed to make intelligible the situated activities and actions of practitioners. Thus, the ethnographic design conceives the situated action as an emergent possession of the intermittent and on-going interaction between practitioners, and between practitioners and their environments (Suchman 1987:179). In line with situated and contextualised activities, Leith (2018:38) suggests that ethnography is a useful research design that addresses the practice approach in terms of the ability to engage with the enactment of practice, as well as with its social, embodied, material and affective components, in the context of social site, and through contact interaction between the researcher and participants of the site.

The ethnographic research design accentuates the importance of a researcher's engagement with the participants of the field (Leith 2018:37). It is in such line that Schatzki (2012:24-25) points out that in researching practices, the ethnographic research design cannot be disregarded. He notes, "There is no alternative to hanging out with, joining in with, talking to and watching, and getting together the people concerned".

This study adopts ethnography as its research design. The notion that ethnography places emphasis on social relations presents an important reason for its adoption in addressing the research questions in this study. It provides an avenue for the researcher to investigate the *sayings* and *doings* that contribute to the enactment of the information literacy practice of the Bonwire Kente Centre. Alluding to Leith (2018:38), ethnography enables the researcher to investigate and describe the practices of the Bonwire Kente Centre as a means of revealing, or uncovering social relations to understand the meaning of social life.

The question of how much extended time is enough for data collection is an ongoing debate in the ethnographic literature (Rashid, Caine & Goetz 2015:3; Leith 2018:37). Though anthropologists are of the opinion that an ethnographic study should be at least one year in the

field, according to O'Reilly (2009:213), some researchers have produced quality ethnographic studies in far less time. Examples of such studies in information science include Pilerot (2014b) six months, Sundin and Francke (2009) six weeks, and Sundin, Francke and Limberg (2011) seven weeks. These examples attest to Charmaz's (2006:18) point that though it takes time, all that matters is that the ethnographer is able to collect quality-sufficient data to represent the picture of the ethnographic field. This, according to O'Reilly (2009:213), should be credible and capable of satisfying the reader that concrete and effective effort was made and that the ethnographer produced data from a solid foundation of observation. O'Reilly (2009:213) outlines the importance of spending enough time in the field:

- Time provides avenues to witness first-hand the complex interlacing events, interactions and interpretations;
- Time also affords space for the selection of the time of day, week or month to be at the place or event where culture is being unravelled.

It is in line with the above argument that this study is carried out in six months of fieldwork working with the weavers at the Bonwire Kente Centre. The decision to spend six months in the field is inspired by the fact it takes about six months to learn Kente-weaving (Boateng 2018:137). Besides, the researcher has significant prior knowledge of the site and is familiar with the culture and weaving processes. The researcher has lived in a similar community nearby where Kente fabric is also woven and is abreast with the culture of the weavers (weaving practitioners). Therefore, a period of six months in the field will suffice.

6.5 DATA COLLECTION PROCEDURE

The data collection procedure simply refers to the process of gathering information to find answers to a research problem (Kabir 2016:202). In this section, the researcher discusses how he collected data for the study. As a consequence of this, the following sub-sections, negotiation access and the role of the gatekeeper and the role of the researcher are discussed.

6.5.1 Negotiating access and the roles of the gatekeepers

The term ‘access’ is most often aligned with the descriptions of gatekeepers and their roles (Kay 2019:39). According to Andoh-Arthur (2019), gatekeepers are important intermediaries that provide or facilitate access to the study setting or potential participants of social research. He explains that they may be individuals within an organisation who have the power to grant or deny access to the study setting or the potential participants. They may also be persons who are influential and invaluable for their knowledge and connections with the potential participants of the study setting (McFadyen & Rankin 2016:82; Andoh-Arthur 2019).

Gatekeepers are not proponents with specific roles only, but also facilitators of the data collection process which enables the possibilities of research action (Bryman 2016:142; Collyer, Willis & Lewis 2017:97; Kay 2019:40). The roles of gatekeepers are influenced by motivational factors. These motivational factors stimulate the individual to engage if there is personal satisfaction, a sense of achievement, recognition from the research team and awareness of the need for research (McFadyen & Rankin 2016:87).

Through a contact, the researcher contacted a gatekeeper of the Bonwire Kente Centre. This gatekeeper is an executive member of the group of weavers at the Bonwire Kente Centre. He facilitated a meeting between the researcher and other executives of the Bonwire Kente Centre to discuss the rationale behind the research. In that meeting, the executives asked a series of questions. The questions included:

- Where do you come from?
- What is the research about?
- What is the role of the weavers in the research?
- How will the research be conducted?
- How long will it take to conduct the research?

The researcher answered these questions honestly and clearly. Upon realising the researcher hails from a nearby village where Kente fabric is also woven, though not on such a large or extensive

scale as in Bonwire, specifically the Bonwire Kente Centre, trust was built and approval to conduct the research was granted. This was because the researcher was regarded as a brother. The researcher was subsequently introduced, by the executives, to the weavers at one of their regular meetings. The executives explained to the weavers that the researcher came from a nearby village and was conducting research on how they know what they know. Without exception, the researcher was welcomed enthusiastically by the weavers and was encouraged to feel free to ask anybody any questions during the conduction of the research.

6.5.2 The role of the researcher

In an ethnographic study, there are challenges associated with the engagement of participants in the real world. The role of the researcher becomes paramount in the data collection and analysis process (Jones & Smith 2017:98). First, as an ethnographer, the researcher decides whether to employ a covert or overt approach to data collection and observation (Jones & Smith 2017:98). In a covert approach, the participants are not informed that they are being observed, whereas in the overt approach participants are informed that they are being observed (Jones & Smith 2017:98).

Second, the researcher decides which position to take, either “insider” (emic), or “outsider” (etic). (Hammersley & Atkinson 2007; Jones & Smith 2017:98). An emic position requires immersing into the culture, observing and recording participants’ way of life and activity (Jones & Smith 2017:98). From the emic position, the researcher looks at things from the viewpoints of the participants of the culture being studied (Willis 2007:100; Brown, McIlwraith & de González 2020:48). An emic position is taken when the researcher attempts to capture the indigenous meaning of the practices of participants (Yin 2010:11). To capture the indigenous meaning, the researcher (ethnographer) observes the participants, talks to them and participates in their daily practices with them (Brown, McIlwraith & de González 2020:48-49). On the other hand, when a researcher takes an etic position, he observes and describes the community and the culture of the participants from an external view, through pre-existing theories and perspectives (Olive 2014; Jones & Smith 2017:98). According to Brown, McIlwraith and de González (2020:49), the etic position is taken when the researcher believes that the participants are unlikely to view the

practices they are involved in as noteworthy, and therefore adopts the etic position to explain the practices of the participants by observation through a scientific, historical, political or economic lens.

The researcher took an overt and emic position to collect data; this decision was taken to understand and garner meaning from the weavers' perspective as they engage in their daily practices. To this end, the researcher adopted the role of a 'participant as observer' by becoming a novice weaver. The role of a researcher as 'participant as observer' is explained in section 6.7.1. Considering how informal the Bonwire Kente Centre is, by assuming this role, the researcher became an apprentice to a master weaver.

According to Eriksson and Kovalainen (2015:159), in ethnographic research, the researcher continuously analyses, interprets and learns from the empirical data during the data collection by providing creative insight in terms of the purpose of the study. In so doing, the researcher is able to view, close-up, what is emerging from the data and the unique *doings* to answer the research questions. According to Bernard (1994:145) and Kawulich (2005), the researcher is also expected to learn to speak the language of the group that is being studied. This, they suggest, assists in increasing rapport and as a result, provides the opportunity for a better understanding of the participants.

6.6 TARGET POPULATION AND THE SELECTION OF PARTICIPANTS

Qualitative research aims to acquire rich and useful information to understand the complexity of the research field and not to represent the complete population of the study (Gentles, Charles, Ploeg & McKibbin 2015:1782). In Bonwire, the practice of Kente weaving is male-oriented with all the practitioners being males. The gender bias is influenced by the customs and traditions of the Bonwire Community. As a group, the weavers at the Kente Centre have leaders that chair meetings and address issues of concern to practitioners. Though some weavers weave Kente in their homes in Bonwire; most of the weavers gather at the Kente Centre to weave. At the Kente Centre, there are different levels of practitioners: master weavers, junior weavers and

novices as noted by Sabutey (2009:151). Novice weaver qualifies to become a junior weaver when he is able to produce basic and intricate Kente designs with little or no supervision. Master weavers are experts with knowledge of the know-how, and philosophies resulting from several years of practice. They have the know-how to make a judgment on Kente-weaving practice (Sabutey 2009:151).

The population of the ethnographic field constitutes the three types of weavers in the Bonwire Kente Centre: master weavers, junior weavers and novice weavers, with a total population of 62. The different categories and their numbers included:

- Master weavers: 25
- Junior weavers: 20
- Novice weavers: 17

Considering the heterogeneity of the participants of the Bonwire Kente Centre, a sample was selected using a purposive sampling technique with the view to acknowledge and include the entire spectrum of weavers. According to Campbell, Greenwood, Prior, Shearer, Walkem, Young, Bywaters and Walker (2020:654), the use of the purposive sampling technique ensures that the various categories, which in this study included weavers at all levels, of the population are represented in the final sample of the study. Purposive sampling is based on the researcher's judgment on participants' qualities or usefulness as far as answering the research questions is concerned (Etikan, Musa & Alkassim 2016:2).

In total, 24 participants (consisting of eight weavers per category) were included in the sample for this study. The sample size of 24 participants is underpinned by the fact that the researcher realised he reached a point of saturation as no new ideas were emerging. This decision is supported by Boddy (2016:427) and Hennink and Kaiser (2022:3) who argue that the researcher can continue sampling until he reaches the point at which the issues begin to be repeated in the data. Vasileiou, Barnett, Thorpe and Young (2018) describe this principle as the most widely used method for determining data sufficiency and sample size in qualitative research. Thus, the basis for the sample size of 24 hinges on the point of saturation. The researcher used 'code

meaning' approach to assess the saturation for this study. The 'code meaning' approach involves reviewing and noting each code identified in the interviews as the researcher carries on identifying whether any new dimensions or aspects of each code are further discovered. When nothing new is discovered, the codes have reached saturation (Hennink & Kaiser 2022:6). Codes are defined and explained as part of the data analysis in section 6.8. The point of saturation was confirmed after interviewing four consecutive participants after the 20th participant as no new issue was found. The new participants were virtually saying the same things. Alluding to the study of Hennink and Kaiser (2022:6), a sample size of 24 is considered large and justified in that; it is larger than the mean of 21 interviews for which studies that used heterogeneous samples reached saturation.

It is important to note that the identification and selection of the participants were done with the help of a gatekeeper. To have a fair representation of the master weavers, the researcher selected the four master weavers each from those with weaving experiences of less than ten years, and those exceeding ten years. To appreciate the different learning experiences of the novice weavers, the sample of novice weavers consisted of four participants each from those with learning experiences of less than six months, and those with more than six months. For the junior weavers, four participants each were chosen from those with less than five years and those with more than five years of weaving experience, respectively.

6.7 DATA COLLECTION TECHNIQUES

Data collection techniques used in ethnographic studies include observation, interview, texts and documents analysis, and views and feelings analysis (Hunt 2001:99-100; Madden 2017; Creswell & Creswell 2018:48; Creswell & Poth 2018:216). Creswell and Poth (2018:242) and Sirris, Lindheim and Askeland (2022:134) highlight interview and observation as the two most used data collection techniques in ethnography. According to Schatzki (2012:24), using only one of these techniques is not enough to explore the practices of a site.

About researching practices using the ethnographic design, Schatzki (2012:24-25) suggests that there is no alternative to knowing something about human ways, living and arrangements unless

the researcher is familiar with the human situations. For this reason, he advocates that the researcher must understand or learn the language, watch videos and read literature about the participants of the practice to gain general knowledge to be prepared for the fieldwork. As the researcher grew up and lived most of his life in a village near Bonwire, where Kente is also woven, attests to the fact that he is familiar with the language, and has a general and fair knowledge of the weaving practices in Bonwire, and is therefore equipped to collect data using both interviews and observation.

6.7.1 Observation

Observation is described as the systematic description of activities, actions, behaviour and artefacts of a research setting (Marshall & Rossman 1989:79). It involves the act of observing actions using human senses and recording those observations often, with a note-taking tool for scientific purposes (Angrosino 2007:54,65; Creswell & Poth 2018:232). The observational records of the daily events, participants' viewpoints and reflections the researcher has when participating in the activities of the setting are referred to as field notes (Eriksson & Kovalainen 2015:155,158; Creswell & Poth 2018:236; Gatta 2019:57; Brown, McIlwraith & de González 2020:48).

There are some advantages relating to the usage of observation as a data collection technique. Some of these advantages are as follows:

- It enables the researcher to collect first-hand data that may not have been obtained through other data collection techniques (Finesurrey 2019:65).
- It provides the researcher with direct experience with the participants in their natural setting (Creswell & Creswell 2018:256).
- It allows the researcher to collect data directly from what people do when an activity is taking place irrespective of their willingness to provide information or not (Ekka 2021:18).

- It provides the researcher with the opportunity to gather detailed descriptions, improve understanding of events (including unscheduled ones) to enable interpretation as well as develop new questions to ask participants of the research (DeMunck & Sobo 1998).
- It helps the researcher to check for nonverbal expressions of the participants to ascertain how they interact and communicate with each other (Schmuck 1997).

There are different forms of observation in research. These include non-participant and participant observation (Baker 2006:174; Ciesielska, Boström & Öhlander 2018:34). Participant observation is described as the key form of observation in ethnographic research (Creswell & Poth 2018:242; Walford 2018:6). Bronislaw Malinowski is considered the pioneer of this data collection technique (Ugwu 2017:80). In participant observation, the researcher participates in the lives of the people being studied by observing their practices and listening to what they say (Becker & Geer 1970:133; Baker 2006:173; Takyi 2015:864). He takes up a role and observes what goes on in the setting (Walford 2018:6). The extent to which he observes and participates is categorised into four roles:

- Complete participant – is a covert approach where the researcher fully engages and immerses in the activities of the setting. It implies going ‘native’ without disclosing his or her research role to the group.
- Participant as observer – is an overt approach where the researcher integrates and participates in the activities of the site within the context of the study.
- Observer as participant – is an overt approach where the researcher observes for a brief period to collect data from a distance. It is used as a follow-up tool to interviews.
- Complete observer – the research employs a covert approach where the researcher observes and gathers data from a distance (Gold 1958; Angrosino 2007:54-55; McNaughton, Mills & Kotecha 2014: 244-248; Creswell & Poth 2018:233-234).

According to Takyi (2015:864), researchers hardly make a case for a particular role they adopt. ‘Participant as observer’ is a key technique for data collection in ethnography (Eriksson & Kovalainen 2015:156). It gets the researcher more involved in the core activities to understand the setting holistically (DeWalt & DeWalt 2002:92; Baker 2006:177). It also provides the

researcher with a contextual understanding of the phenomenon under study and thereby gives credence to the researcher's interpretation of the observed action, activities or item (Bernard 1994:142-143; Takyi 2015:868). Takyi argues that 'participant as observer' is the most suitable role because people share information more easily with friends, rather than with strangers. This, he explains, enables the researcher to build rapport and close contact, which enables the sharing of information and practice details (Takyi 2015:869). The researcher adopts the role of a 'participant as observer' to collect data for this study. This decision is based on the fact that the 'participant as observer' enables the researcher to participate in the lives of the weavers and collect relevant data essential to holistically understanding the information literacy practice of the Bonwire Kente Centre. An 'observation guide' (see Appendix 1), pre-set information sheet was formulated to collect data on the following:

- How the practices of the Kente-weaving landscape are performed.
- How novices become informed of the practices of the Kente-weaving landscape.
- How novices develop the know-how of the practices of the Kente-weaving landscape.
- How developing the know-how of the practices relates to the body.
- How the performance of the practices relates to the material objects.

The 'participant as observer' role was adopted by the researcher by accepting the position of becoming an apprentice and progressing to that of a master weaver. As an apprentice, the researcher had an all-embracing mindset, which enabled full access to the practices of the Bonwire Kente Centre. Alluding to Neyland (2008:85), by adopting an all-embracing mindset, the researcher treated the Bonwire Kente Centre workplace as 'strange' to ensure that nothing was taken for granted in the observation. By participating and observing, the researcher was interested in making visible the information practice that enabled *knowing* or information literacy at the Bonwire Kente Centre, using a field diary (field notes). By listening and watching practitioners perform, and taking detailed notes, thorough observation ensued.

It is important to note that observation as a data collection technique is not perfect. There are some disadvantages/limitations regarding its usage. For Arumugam, Antony and Douglas (2012), observation requires good memory skills and it is challenging to measure in quantitative terms.

This limitation was addressed with the use of field notes. The researcher jotted down field notes to remember the observed activities experienced in the field as suggested by Gatta (2019:57). In order not to forget relevant details, the researcher wrote the field notes during the fieldwork as suggested by Eriksson and Kovalainen (2015:155,158) and Brown, McIlwraith and de González (2020:48). As a qualitative study, the focus of the study was on qualitative data and as such, there was no need to quantify the observational data.

Another criticism of the participant observation relates to the “Hawthorne Effect”, the behavioural changes emanating from the observer's presence (O’Reilly 2009:211; Finesurrey 2019:65; Ekka 2021:18). The researcher’s decision to become an apprentice was partly to avoid or reduce the behavioural changes caused by changes external to the individuals (in this case the weavers), for example, having a newcomer within the landscape and knowing that they are observing you (O’Reilly 2009:211). According to O’Reilly (2009:211), this tendency to feel uncomfortable does diminish over time, as the ethnographer joins in and becomes part of the landscape that others take for granted. In effect, the researcher’s decision to become an apprentice was partly taken to limit the possibility of behavioural changes regarding the *sayings* and *doings* when interacting with the weavers and endeavouring to build rapport at the Bonwire Kente Centre.

According to Ekka (2021:18), observation does not explain or give reasons for what people do and is therefore susceptible to the observer’s bias. To mitigate the tendency of being biased, the researcher sometimes sought for ‘real interpretation’ of observed events from the weavers to understand from their perspectives.

6.7.2 Interviews

Interviewing is the commonest technique for data collection in qualitative research and is described as a process of directing a conversation to collect information (Angrosino 2007:51; Jamshed 2019:87). It is also described as the way to uncover and understand the lived world of participants through their perspectives and experiences (Brinkmann & Kvale 2015:3). It is an exchange between the researcher and the participants where a researcher puts together a set of questions to gather information on a specific topic (Blackstone 2012:108). The questions asked

and to whom they are directed are guided by the research purpose and questions of the study (Creswell & Poth 2018:230).

In ethnography, interviewing takes the form of informal conversation and interaction with the participants. It is carried out in an informal, friendly and face-to-face manner to obtain more in-depth data (O'Reilly 2009:128-129; Khanal 2016:102,115). Understanding the context and culture of the cultural setting is key to the generation of data in an ethnographic study (Khanal 2016:103).

Interviews can be formal, informal, unstructured or semi-structured (Finesurrey, 2019:85). According to Runcieman (2018:54), in ethnography, interviews are not completely unstructured but rather more open, or semi-structured, where the language shapes the ethnographer's questions and how participants choose to express themselves. When using semi-structured interviews, the researcher goes in-depth to obtain answers to pre-set, open-ended questions (Jamshed 2019:87). According to DeJonckheere and Vaughn (2019:1), the semi-structured interview takes the form of a dialogue between the researcher and the participant under flexible interview protocols, which allow for probes, comments and follow-up questions. It is described as a conversation in which the researcher knows what he/she wants to find out and therefore prepares a pre-determined set of questions to ask the participants (Fylan 2005:65). Fylan explains that the conversation is free to vary and may change with different participants (Fylan 2005:65). The flexibility of this data collection technique enables the researcher to ask the "why" and "how" questions of participants' experiences (Finesurrey 2019:85). It enables exploration into the participants' feelings, beliefs and thoughts about a certain phenomenon. (DeJonckheere & Vaughn 2019:1).

According to DeJonckheere and Vaughn (2019:1), among other activities, the following should be considered when conducting a semi-structured interview:

- Establishing the purpose and scope of the study
- Determining who the participants are
- Establishing trust and rapport

- Examining the influence of ethical issues
- Planning the logistics
- Developing an interview guide
- Process of conducting the interview.

The interview guide is the formulated list of questions that the researcher prepares for the interview (Finesurrey 2019:86). Researchers explain, as follows, when the semi-structured interview may be used in ethnographic research:

- When the research participants of the ethnographic field are heterogeneous and the ethnographer wants to ask similar sets of questions to each group and follow-up – depending on the responses (Finesurrey 2019:87).
- As complementary data collection technique to a long-term participant observation where good rapport and trust have been built over time (O'Reilly 2009:129-130).

The semi-structured interview is chosen as one of the data collection techniques for this study. This decision is premised on the fact that the research participants are heterogeneous (for example, master weavers, junior weavers and novice weavers). The semi-structured interview enables the researcher to elicit information from all the levels of weavers at the Bonwire Kente Centre (see interview guide: Appendices 2A & 2B). Again, the semi-structured interview technique is chosen to complement and support the participant observation technique. The semi-structured interview was conducted in a conversation-like manner due to the researcher's closeness and good rapport built over his apprenticeship as a novice weaver. In addition, the researcher, being a *Twi* language speaker as well, established an environment of familiarity and trust that enhanced the rapport and ensured that the interview was conducted in a friendly and informal manner. Where required, the researcher allowed the weavers to lead the interview/conversation by listening more and talking less. The researcher conducted the interview personally and face-to-face. The following are some of the advantages of the face-to-face semi-structured interview:

- The synchronous-communication nature of the face-to-face semi-structured interview in terms of time and place provides access to social cues such as voice, intonation and body language. The social cues provide the researcher with extra information to the verbal responses (Opdenakker 2006).
- It is practical to use for in-depth conversations where the researcher can scrutinise participants' (interviewees') responses during the interview to conclude (Kakilla 2021).
- It provides room for free responses and follow-up questions that are specific to each research participant (Finesurrey 2019:85; Kakilla 2021).
- It provides the researcher with the avenue to solicit information where observation is not practicable or ideal (Creswell & Creswell 2018:256).
- It can be recorded and later examined when permission is granted from the interviewee (Opdenakker 2006).

The questions were open-ended questions framed from the research questions. The researcher spent an average of thirty-one minutes on each interview at the Bonwire Kente Centre. The interviews were recorded and then transcribed into text by the researcher himself. This allowed the researcher to assess the similarities and differences in participants' responses. The researcher translated direct quotations into English using pseudonyms for anonymity data analysis. It is important to note that this study, like Pilerot's (2014a:53), subscribes to Mol's (2002:15) ethnographic design methods, where participants in the study are considered to be their ethnographers as well, "not of thoughts and feelings", but like those who give an account of how information literacy "is done in practice". In this sense, the responses that participants provided to the interview questions were not considered as representing their perspectives; but rather representing the events, processes, practices and activities they have lived through in the Kente-weaving landscape. Therefore, participants' responses were treated as a narration of their experiences with the Kente-weaving practices. During the conversation-like interview, it happened often that participants would suspend a task to demonstrate techniques they were describing to the researcher and subsequently explain how the researcher could practice said technique.

Like all other data collection techniques, the face-to-face semi-structured interview is bedevilled with some disadvantages (limitations). The researcher highlights some of these disadvantages:

According to Creswell and Creswell (2018:256), the researcher's presence may bias participants' (interviewees') responses. The tendency is reduced by the researcher's decision to become an apprentice. This enables the participants to familiarise themselves with the researcher so that their responses are not influenced by the researcher's presence.

Another disadvantage is that the synchronous nature of face-to-face semi-structured interviews requires a strict level of concentration and engagement since the researcher has to formulate further questions from the interactive nature of the interview (Opdenakker 2006; DeJonckheere & Vaughn 2019). To mitigate this tendency and ensure to ensure quality data, the researcher listened carefully and made sure that probing and follow-up questions were asked to get the full understanding of participants' responses.

Another disadvantage has to do with language barriers. Language barriers can cause limited responses and affect probing both on the part of the researcher (interviewer) and the participants (interviewees) (Barriball & While 1994; Marshall & While 1994). This can cause a limited understanding of the topics. According to Kakilla (2021), the issue of language can be resolved with the help of translators; however, this method has its weaknesses. This situation never arose as the interviews were conducted in the native language (Twi) of the participants (interviewees) for which the researcher (interviewer) is a speaker.

6.8 DATA ANALYSIS

Data analysis constitutes the activities of classifying linguistic or visual materials and interpreting them based on the implicit or explicit meaning they connote (Flick 2014:5). It is a spiral activity, which involves reading through, coding and organising data into themes with supported interpretation (Creswell & Poth 2018:248). Data, whether text or image, can be analysed manually, or by using computer software (Patton 2015:530-531; Creswell & Poth 2018:248). Patton (2015:530-531) explains that the use of software is not obligatory for qualitative analysis, whether it is done manually or with the use of software, the real analysis is done mentally.

In qualitative studies, a data set can be analysed either by the content or thematic analysis (Vaismoradi & Snelgrove 2019:1). The thematic analysis is a data analysis method used to identify, analyse and report themes found in a data set in qualitative research (Braun & Clarke 2006:79). According to Wæraas (2022:153), thematic analysis is applicable to interview transcripts, field notes (observation data) and marketing materials. It is used to categorise and summarise large data sets into themes according to the key features (or relationships) to produce a clear final report, especially, in situations where the objective of the research is to examine the perspectives of different research participants (Boyatzis 1998; King 2004). The processes involved in thematic analysis are not linear, but iterative and reflective, involving a back-and-forth between phases in the analysis of the data set (Braun & Clarke 2006; Nowell, Norris, White & Moules 2017:4).

This study adopts thematic analysis as its data analysis technique. This decision is taken because the thematic analysis technique is appropriate when the researcher seeks to understand the participants' experiences, behaviour or thoughts across data sets (Kiger & Varpio 2020:1). In this study, the researcher seeks to understand the participants' experiences as far as learning the craft of weaving is concerned through the search for common or shared meaning. The thematic analysis of the data set was done inductively (data-driven) where the focus was on the emerging codes. The decision to do a data-driven analysis is inspired by the exploratory nature of the research objective.

The analysis of the data set was done according to Saldana's (2013:13) codes-category-theme model for qualitative inquiry. The model provides the link from the codes through the category and to the theme. Saldana explains that a code is a word or phrase that is used to describe the salient and evocative trait for a portion of data. The data set can comprise interview transcripts or field notes emanating from participant observation (Saldana 2013:13). According to Rossman and Rallis (2003:282) and Saldana (2013:12, 14), a category is a word or phrase that describes the coded data in explicit terms according to its content. They explain that codes are clustered to form a category. Categories are compared with each other and those that are similar are consolidated to form a theme. A theme is a patterned word or phrase that describes the data in a

more subtle way to inform the research question (Rossman & Rallis 2003:282; Braun & Clarke 2006:82; Saldana 2013:12,14).

The data analysis began in the field, in conjunction with the data collection, where the researcher read the field notes (observation data) and interview transcripts to familiarise himself with the responses and what was observed. The field notes and interview transcripts were (re)read for added insight. The field notes and interview transcripts were coded together. The focus of the coding was based on what is evidential as well as what is implied by the data set. Coding in the thematic analysis was done manually. According to Saldana (2013:26), manual coding helps the researcher to take ownership of, and control over, the data set. The coding provides the link from the data set to the idea as well as from the idea to the entire data set that supports the theme (Richards & Morse, 2007:137).

Following this, initial codes were assigned in table format in a Microsoft word file where quotes, which share the same ideas, were grouped under common codes. Initially, 63 codes were generated from both the field notes and the interview transcripts. Depending on the emerging idea from the analysis of the field notes and interview transcripts, some of the initial codes were either abandoned, revised or merged with other codes. For example, a code like 'Tools production knowledge' was abandoned because there were not enough quotes to support it; only one participant referred to the production of tools and there were no field notes to support it, hence it was abandoned.

In addition, a code like 'Information on faults and error fixing', was refined to 'challenges and defects fixing information' to describe the idea the underlining quotes and field notes appeared to communicate. What this meant was that the initial code 'Information on faults and error fixing' was renamed, 'challenges and defects fixing information'.

After the abandonment and refinement of the initial codes, 24 final codes were generated (see Appendix 3). Alluding to Saldana (2013:8), codes that shared similarities and regularities were clustered into broader categories. For example, final codes such as 'Knowledge of procedures and techniques', 'Weaving defect-free fabric' and 'Fast-weaving skill' were found to be related

to the production of Kente fabric, hence they were clustered together to form the category called ‘Kente production knowledge’. The categories of the data emanating from the final codes were checked for coherent patterns. In this way, the researcher developed the themes by refining the categories to reflect the meanings they purported to represent from the data set. For example, categories like ‘Opportunity to receive guidance’, ‘Opportunity to observe’, ‘Opportunity to practice’, and ‘Listening and hearing conversations’ were refined to form the theme ‘Access to the workplace affordance’.

Themes that were deemed to be dense and merited further refinement were refined into sub-themes. For example, a theme like ‘Access to Kente information’ was found to consist of the procedures and techniques as well as the history and background of the Kente fabric. Hence, the theme ‘Access to Kente information’ was refined into two sub-themes: ‘Access to procedure and techniques information’ and ‘Access to history and background information’. The sub-theme ‘Access to procedure and techniques information’ was also found to comprise varied information that needed to be separated for clarity; it included information about off-the-loom and on-the-loom procedures and techniques. It is on this basis that the sub-theme ‘Access to procedure and techniques information’ was further refined into two sub-themes: ‘Access to off-the-loom preparatory procedure and techniques information’ and ‘Access to on-the-loom procedure and techniques information’.

Excerpts from the interview and observation data were used to illustrate and support the themes (see Appendix 3). Excerpts that communicate the same idea and those that provide more information that describe the theme as well as those that fit into the logical sequence of the argument were used.

6.9 ETHICAL CONSIDERATION AND TRUSTWORTHINESS

Upholding the highest ethical standard in research is non-negotiable. It is even considered one of the ways of ensuring the trustworthiness of the result (McAuliffe 2009). According to King (2004), the ethical issues that normally arise in qualitative research include the following: participants’ privacy and anonymity, informed consent, plagiarism and trustworthiness. In

addressing the ethical issues noted above, the researcher applied for and was granted ethical clearance from the College of Human Science Ethics Committee at the University of South Africa (see Appendix 4). The researcher adhered to all the ethical guidelines underpinning scientific inquiry at the University of South Africa (UNISA 2016).

Concerning plagiarism, all secondary sources that are used in the research are duly cited and referenced. This study has been subjected to plagiarism checker software, as required of every doctoral student by the University of South Africa. The researcher adhered to all the ethical guidelines regarding copyright infringement and plagiarism underpinning scientific inquiry at the University of South Africa (UNISA 2015).

Regarding trustworthiness, researchers have disputed the use of the concepts of reliability and validity to ensure the quality of qualitative research as compared to that of quantitative research (e.g. Lincoln & Guba 1985; Fidel 1993; Bryman & Teevan 2005). Guba and Lincoln describe the use of the concepts of reliability and validity in qualitative research as faulty and inappropriate. They liken it to asking a Methodist audience a Catholic question (Guba & Lincoln 1989:202). The inappropriateness adduce to reliability and validity stems from the lack of replication of data in qualitative research which is a result of the flexibility, creativity and dynamism that are associated with and employed in qualitative research (Fidel 1993:231). Instead of reliability and validity, Lincoln and Guba (1985) advocate for the concept of trustworthiness to gauge the quality assurance of qualitative research. According to Shenton (2004:64), the concept of trustworthiness in qualitative research could be achieved using the following criteria: credibility, transferability, dependability and confirmability.

The concept of credibility deals with the congruence of the findings in line with the participants' realities (Guba & Lincoln 1989). To obtain credibility in qualitative research, Shenton (2004:64) proposes that researchers ensure the following guidelines:

- familiarity with the culture of the group;
- employ random sampling techniques;
- triangulation of data collection methods; and

- employ strategies to ensure honest responses.

In line with Shenton's (2004:64) proposal, the researcher is familiar with the culture as well as the literature of the Kente weavers (practitioners) as demonstrated in Chapter 5. This enables the researcher to interpret and understand the actions and responses within the Kente-weaving context.

Again, the researcher employed triangulation in data collection. Triangulation involves multiple methods, observational techniques and empirical materials to ascertain accuracy, comprehensiveness, representation as well as verification to enhance the trustworthiness of the research (Stake 2000:443; Silverman 2006:291). In this study, two data collection methods were used to ensure credibility, namely, interview and observation. In addition, the responses and experiences of the participants were compared with and verified against each other to get a rich picture of the information literacy practice of the Bonwire Kente Centre. To ensure genuine observation and honest responses from participants, the researcher explained to participants that there was no wrong or right answer to any question and that their identity would also be concealed. This assurance was given to ensure that participants felt free to talk and go about their work activities. To keep his word on the issue of privacy, the researcher concealed the participants' identities. Hence pseudonyms were used when referring to specific participants.

Considering the purpose of this study and the heterogeneity nature of the participants, it would have been faulty to do random sampling. The researcher ensured that novices, junior and master weavers were all represented in the data collection process. In this regard, a purposive sampling technique was adopted. The researcher requested the participants to sign consent forms (see Appendices 5A and 5B). The weavers were informed that participation was voluntary and that they could opt out of the study if they felt uncomfortable at any stage; fortunately, none of the participants chose to withdraw.

Another trustworthiness issue that was addressed in this study is transferability. According to Guba (1981) and Shenton (2004:69), transferability refers to the degree to which findings (in this case the result of this study) can be applied to other similar situations or contexts. This relates to

the external validity or how generalisable the research findings are (Guba 1981). The findings that emanated from this study may not be generalisable to all weaving-workplace contexts, however, they may apply to weaving centres that are nearby Bonwire and within the Ashanti Region of Ghana. This is because they share similar, if not the same context, and are all of the same tribe, namely, Asantes.

Dependability refers to the degree to which similar findings could be obtained if the research processes were to be followed (Guba 1981). According to Shenton (2004:71), this warrants the need to report in detail how the research was conducted. Consequent to this, detailed descriptions of how the findings of this research were arrived at, have been reported in this chapter (Chapter 6). Again, all materials such as interview guides that were used have been provided in Appendices 2A and 2B.

Confirmability deals with the extent to which the findings are reflective or representative of the participants' voices devoid of the researcher's bias (Guba 1981; Shenton 2004:72). The researcher ensured confirmability by providing the transcripts and the recordings to two lecturers to confirm that the transcripts represented the views of participants. One of the lecturers teaches *Twɔ* (the native language in which the interviews were conducted) at the College of Education in Ghana; the other comes from Bonwire and was formerly a Kente weaver. The provision of the interview transcripts to these two experts to verify whether the contents of the interviews corresponded with the transcripts ensured the integrity of the data. As explained to the participants (see Appendix 6), all hard and soft copies of participants' responses are kept in a secured cabinet and on a password-secured computer respectively. All information will be preserved for five years, after which both hard copies and soft copies will be destroyed or deleted.

6.10 METHODOLOGICAL CHALLENGES

This study is not without methodological challenges. One of these challenges has to do with the conduction of the interviews in the native language (*Twɔ*) of the participants and the subsequent translation to English. Though the researcher is a native speaker of the *Twɔ* Language, there were

indigenous and weaving terminologies that were challenging to translate into English. On so many occasions the researcher had to consult some native speakers who are professional translators for assistance. Some of such indigenous terminologies are '*atwuntwum*' and '*Ɛfoɔ*'. These terms are not everyday-speaking terms. They relate to the Kente-weaving landscape.

Another challenge is the use of the participant observation technique. The 'participant as observer' role posed some challenges to the researcher. Most often, it was difficult for the researcher to focus on his practice as an apprentice and observe at the same time. The challenge of having to practice, observe other practitioners and take notes was not only challenging but distracting. This challenge may have caused a situation where the researcher may not have seen everything happening.

6.11 SUMMARY OF THE CHAPTER

The methodology chapter presents in clear terms how the researcher approached and conducted the research. This chapter presents information on social constructivism and why it was chosen as the philosophy to underpin this study. It also explains the research approach and design appropriate for this study. The methods for collecting data in terms of the roles of the researcher and the gatekeeper are discussed. It gives information on why some methodological decisions were taken regarding the collection of data and analysis. The decisions are supported by relevant literature.

The chapter explains how the data sets were analysed using thematic analysis. The steps of how the codes, categories and themes were generated are explained. The researcher's method of ensuring the rigour or trustworthiness of the quality of this study is also described. Ethical issues are also addressed in this chapter.

The next chapter presents the empirical findings from the Kente-weaving landscape.

CHAPTER 7: EMPIRICAL FINDINGS FROM THE KENTE-WEAVING LANDSCAPE

7.1 INTRODUCTION

Chapter 7 presents the findings of this study. The research questions and the corresponding findings are presented in themes in Table 7.1.

Table 7.1: Schematic overview of research questions and findings in themes

Research questions	Findings in themes	Findings in sub-themes	Findings in sub-themes
Research question one: What constitutes competence in the Kente-weaving landscape?	Kente knowledge	Weaving-related knowledge	Procedures and techniques knowledge
			Defects-free weaving knowledge
			Weaving speed
		Identification knowledge	
		History and Background knowledge	
		Quality determination knowledge	
	Yarns and colours combination knowledge		
Mentorship capability			
Research question two: How do novices becoming competent weavers enabled by information literacy in the Kente-weaving landscape?	Access to Kente information	Access to off-the-loom Kente information	Weft preparation information
			Warp preparation information
			Heddling and reeding information
			History and background information
		Access to on-the-loom Kente information	Stretch and tie-up techniques information
			Patterns-setting information
			Weaving techniques information
			Challenges and defects fixing techniques information
Research question three:	Access to the	Information affordance	

Research questions	Findings in themes	Findings in sub-themes	Findings in sub-themes
How does workplace interaction and participation deepen or enact novices' information literacy of the Kente-weaving landscape?	workplace affordance	through mentoring and guidance support	
		Information affordance through observation and learning by doing	
		Information affordance through workplace conversations	
Research question four: How does becoming information literate relate to material objects in the Kente-weaving landscape?	Learning to use tools		
Research question five: How does the body enable information literacy in the Kente-weaving landscape?	Understanding cues		

The next sections will present more details of the findings. The themes are presented first, then explained and supported with evidence, in terms of the extracts (quotes) and field notes. The quotes are supported with pseudo names.

7.2 KENTE KNOWLEDGE

The findings for research question one (What constitutes competence in the Kente-weaving landscape?) show that the ability to demonstrate knowledge about the Kente fabric constitutes competence in the Kente-weaving landscape. Kente knowledge constitutes the following:

- weaving-related knowledge
- identification knowledge
- history and background knowledge
- quality determination knowledge
- yarns and colours combination knowledge.

Therefore, to be considered a competent weaver, the person should be able to demonstrate the elements that constitute Kente knowledge.

7.2.1 Weaving-related knowledge

According to the findings, a competent weaver is supposed to demonstrate weaving-related knowledge. Weaving-related knowledge encapsulates knowledge of the procedures and techniques, defects-free weaving capability as well as the speed of weaving. This point is elaborated on in 7.2.1.1

7.2.1.1 Procedures and techniques knowledge

Kente weaving involves following and performing relevant procedures and techniques. These procedures and techniques are practical. Hence, competence in the weaving landscape partly constitutes the demonstration of the procedures and techniques knowledge in Kente production. The weaver has to demonstrate that he is equipped with the ‘know-how’ knowledge in terms of the procedures and techniques involved in the making of Kente. Kankam Yeboah, a master weaver, illustrates this point in the following quote:

A competent weaver is one who knows and can perform all the techniques and procedures in Kente weaving.

From Yeboah’s quote, it is understood that Kente weaving is practical work, which involves procedures and techniques and as such, the weaver’s ability to perform the procedures and techniques is perceived as one of the indicators that constitute competence. These procedures and techniques that the competent weaver should be capable of are limited to the Kente-weaving landscape. Schatzki (1996:98; 2000:25) refers to these procedures and techniques as integrative practices of the site; in this case the Kente-weaving landscape. Competence goes beyond having theoretical knowledge of the Kente-weaving procedures and techniques. A competent weaver should be able to produce Kente fabric from start to finish without the help of anyone. The ability to produce Kente fabric is a demonstration of procedures and techniques knowledge. Kwame Bonsu describes competence in the Kente weaving landscape as follows:

A competent weaver is one who can produce Kente fabric from start to finish. A competent weaver knows all the weaving techniques from start to finish.

I mean the competent weaver must know the weaving procedures from A-Z. If a person does not know how to perform the weaving procedures from A-Z, he is not yet qualified to be considered a competent weaver.

It is implied from Bonsu's statement that failure to demonstrate practical knowledge in terms of the procedural knowledge of Kente production is deemed to be incompetence. It is understood here that one of the qualification traits of competence is the ability to perform the weaving procedures and techniques to produce Kente fabric without assistance. Nana Agyei, a master weaver, illustrates this point:

If a weaver is unable to perform even one of the required processes and techniques of weaving, he cannot be regarded as competent.

Just like Bonsu, Agyei agrees that the ability to perform all the required weaving procedures and techniques signals that the weaver is competent. Even if only one procedure or technique is omitted, or not performed to standard, the weaver cannot be regarded as competent. The emphasis on the ability of the weaver to be capable of performing all the weaving procedures and techniques is seen as a feature of competence. Kwaku Marfo, a master weaver, emphasises this point:

These days, many novice weavers do not learn the warp preparation as well as the passing of yarns in the reed and heddles. They prefer somebody to do it for them for a fee. I must state if a weaver does not know how to prepare the warp as well as pass the warp yarns through the 'eyes and dents of the heddles and reed respectively, he cannot consider himself a master weaver. In other words, if a weaver cannot perform all the weaving techniques from A-Z, he cannot classify himself as a master or competent weaver.

From the quotation above, it is clear that some novice weavers are unable to perform all the weaving procedures and techniques because they choose not to learn them. Notable among these techniques is the warp preparation, heddling and reeding. The inability to perform these

techniques would make it impossible for such weavers to grow and transition to become competent.

The weavers have noted the integrative practices that constitute the procedures and techniques of producing Kente fabric from start to finish. These procedures and techniques are winding the yarns onto the bobbins (which is the process for preparing the weft); warping; heddling and reeding; weaving; setting patterns; tying up yarns. Because producing Kente fabric is a practical activity, the ability to perform these procedures and techniques in the Kente-weaving landscape is a paramount consideration for competence. The following quotes illustrate this point:

When we say that somebody is a competent weaver, it means that he knows everything about Kente. He knows how to prepare the warp for weaving. He knows how to pass the warp ends in the heddles and reed. He knows how to set up the loom for weaving. He knows how to tie up the warp in the loom to begin the weave. He knows how to programme patterns on the warp.

--Kwadwo Afriyie, junior weaver

Similar to Afriyie's statement, Agyei says:

A person is regarded as a competent weaver when he knows how to do everything about Kente weaving. The following are what he should be capable of; He should be capable of warping the yarns. He should be capable of setting up the loom on his own. He should be capable of performing tying-up in the loom. He should know how to make all patterns or designs. If you know how to do these techniques then you are regarded as a competent weaver.....He cannot be regarded as a competent weaver if he is unable to perform warping, set up and tie up the warp in the loom and finally make all patterns.

--Nana Agyei, a master weaver

Yeboah concurs:

The competent weaver has to know how to wrap the yarns on the bobbins. He has to know how to warp the yarns using the bobbin carrier. He has to know how to pass the warp ends in the heddles and reed. He has to know how to tie up the yarns on the cloth beam and the drag stone. He has to know how to stretch the warp yarns in the loom for the right tension. He has to know how to weave and make patterns on the fabric. If he is able to do all these, he would be regarded as a competent weaver.

--Kankam Yeboah, a master weaver

As we see from the statements of Afriyie, Agyei, and Yeboah, practical knowledge of winding yarns onto the bobbins, warping, heddling, reeding, tying up, setting patterns and weaving techniques constitutes the understanding of the weaving procedures and techniques. The demonstrations of the 'know-how' as far as these procedures and techniques are concerned partly constitute competence. The production of Kente fabric hinges on these procedures and techniques. Adom (2016) and Amissah and Afram (2018) outline these procedures and techniques as the procedures and techniques a weaver performs in the production of Kente. Hence, its importance in reference to what constitutes competence in the Kente-weaving landscape. This extract from field notes illustrates these procedures and techniques:

I observed that the winding of yarns on the bobbins which are subsequently inserted into the shuttle is the procedure and technique for the weft preparation. Also, the warping technique is for the warp preparation. These two techniques are preparatory techniques that are performed off the loom. Like the other techniques, without the performance of weft and warp preparation techniques, weaving cannot take place. Hence, if a weaver cannot perform the techniques of weft and warp preparation, he would be unqualified to be considered a competent weaver. In the production of a Kente fabric, the procedures and techniques involve the winding of yarns on the bobbins, warping, heddling, reeding, tying up, setting patterns and weaving techniques. I observed that the master weavers have no problem performing all these procedures and techniques.

--Field notes (6 October 2021)

As the master weavers could perform all these general procedures and techniques irrespective of the type of fabric that is being woven, it is implied that the novices and the junior weavers could not perform all these procedures and techniques. In other words, they could not produce Kente fabric from start to finish. Aside from the general procedures and techniques, there are weaving techniques that comprise single, double and triple techniques. These techniques are critical in the constitution of competence. This is how Kwabena Amoako, a master weaver, explained it:

What I know is that, when we say somebody is a competent or master Kente weaver, it means that person knows everything about Kente weaving...He should be capable of weaving fabric with single, double and triple weaving techniques.

From the above statement, it is noted that the practical knowledge of the single, double and triple techniques is key to becoming a competent weaver. Sabutey (2009:117-119) describes these weaving techniques as types of weaves in the Kente-weaving landscape. It is observed that competence is attributed to the ability to perform all these three types of techniques. This point is emphasised by Owusu Adonten, a novice weaver:

I have to know the single, double and triple weave. There are other types of double weave, which my uncle is currently weaving over there; it is called 'dwen ntoma'. If I am able to do all these weaves, ... then I would consider myself to be a competent weaver.

Adonten, being a novice weaver, sees that the ability to perform all the weaving techniques is key to becoming competent.

From the direct quotes and field notes above, it is clear that the ability to perform procedural activities and techniques is a key indicator of becoming a competent weaver. This is to say that when a weaver is able to produce Kente fabric by engaging in all the procedural activities without support, he is considered to be competent. Apart from being knowledgeable in terms of the procedures and techniques, the competent weaver is also expected to be capable of weaving defect-free fabrics. This point is elaborated on in 7.2.1.2.

7.2.1.2 Defect-free weaving knowledge

Just like with every profession there are challenges, this sub-theme discusses the need for the competent weaver to be capable of surmounting weaving challenges as well as the defects associated with weaving. Competence constitutes the ability to weave fabrics without defects. Yaw Marfo, a master weaver, highlights this point:

A competent weaver should be able to weave Kente fabric without defects.

Though the knowledge of the procedures and techniques of producing Kente is an indicator that constitutes competence, the result of defect-free Kente fabric production is an important element of competence. Kwabena Amoako, a master weaver, explains:

We cannot tell from the actions or personal attributes of a weaver whether he is a competent weaver or not; it is about the product he produces. The Kente fabric he weaves tells it all.A competent weaver should be able to weave Kente without defects such as frayed selvage ('atwuntwum'). Also, there should not be broken ends ('Efoɔ') in the Kente fabric he has woven.You cannot tell me that person who has woven Kente fabric full of defects such as broken ends ('Efoɔ') is a competent Kente weaver.

The Kente fabric the weaver produces, is used to determine his competence in the Kente-weaving landscape. The appearance of defects such as frayed selvage ('atwuntwum') and broken ends ('Efoɔ') confirm that the weaver lacks the 'know-how' knowledge in mending such defects during weaving or producing a defect-free fabric. Frayed selvage is a woven defect where the selvage (edge) of a woven Kente strip appears crooked or uneven. On the other hand, a broken end is a woven defect caused by a warp break that loosens the compactness of the fabric, vertically creating space in the fabric. The presence of these defects affects the beauty of the fabric. A competent weaver would be able to address this challenge. To corroborate this point, Nana Agyei, a master weaver says:

When a single yarn among the warp gets broken (torn) while weaving, a non-competent weaver does not have the know-how to mend it and therefore causes the appearance of broken ends ('Efoɔ') on the woven fabric. ... I mean to say that the incompetent weaver, is unable on his own to mend the occurring errors when weaving without the help of a master weaver. In effect, a competent weaver is able to weave fabric without any fault such as the appearance of defects such as broken ends ('Efoɔ'). Also, when there is a broken end ('Efoɔ'), the master weaver is able to mend it.A competent weaver is able to mend fault on his own.

Competent weavers are equipped with the 'know-how' to address weaving challenges and mend defects.

The competent weaver should be capable of producing Kente fabric free from defects. By this, the competent weaver should be knowledgeable to mend and address any challenge or defects that may arise in the production of Kente.

The speed at which a weaver weaves could also be an indication of his competence. This point is elaborated on in 7.2.1.3.

7.2.1.3 Weaving speed

The speed at which the weaver weaves in the loom is used as an indicator for judging competence. The ability to demonstrate fast weaving could constitute competence. Yaw Oppong, a novice weaver says:

For now, I am a slow weaver. If I am able to weave faster I would consider myself a competent weaver.

Novice weavers like Oppong are relatively slow when weaving as they are yet to gain the necessary experience to weave at a fast speed. The number of woven strips a weaver is able to weave a day indicates his level of speed and demonstrates his competence level. Sika Afranie, a novice weaver concurs:

I would consider myself competent when I am able to weave about six strips of fabric a day.

The above statement indicates that the weaving speed is not judged only by the repetitive movements in the loom, but by the output. The only level of weavers who could weave six strips or more a day are the master weavers. This is noted in the following field notes

One characteristic of the master weavers is that they weave relatively faster than novice and junior weavers and are therefore able to weave many Kente strips in a day. Novice weavers could spend the whole day weaving one strip of Kente fabric. A strip of Kente is 64 inches long. As a novice weaver, I wove slowly; I could only weave a third of a strip a whole day.

--Field notes (19 October 2021)

It is understood here that master weavers are able to produce more strips of Kente as compared to novice and junior weavers. The novice weaver cannot even weave a strip of Kente a day, whereas a competent weaver is able to weave as many as six Kente strips per day.

7.2.2 Identification knowledge

The ability to demonstrate identification knowledge is one of the indicators that constitute competence. By identification knowledge, the weaver has the ‘know-how’ knowledge to identify the types of Kente fabric and the embedded patterns woven in them. Some types of Kente fabric are very common at the site (Kente-weaving landscape). Therefore, it is expected that a competent weaver should know these fabrics and the type of patterns woven in them. An example of such Kente fabric is the *Fatia fata Nkrumah*. Kwabena Amoako, a master weaver, notes:

There is a Kente fabric called *Fatia fata Nkrumah*. The *Fatia fata Nkrumah* Kente fabric has some patterns. So a competent weaver should know the patterns on *Fatia fata Nkrumah* Kente fabric.

There are specific patterns that are used to identify *Fatia fata Nkrumah* Kente fabric and by being able to identify the type of patterns woven on the *Fatia fata Nkrumah* Kente fabric, the competent weaver is equipped with the Kente identification knowledge. There are many other types of Kente fabrics as well as patterns that are woven in the Kente-weaving landscape; the competent weaver should be capable of identifying them. The following field notes (10 August 2021) illustrate the point:

I observed that master weavers could call out the name of Kente fabrics and patterns without slack as compared to junior or novice weavers. Some of the novice and junior weavers could not identify some fabrics and patterns shown to them. From the ease at which the master weaver could mention the names of the fabric or patterns appears to me that the master weavers know the names of all the fabrics and the patterns.

Unlike novice and junior weavers, master weavers have no difficulties identifying the types of Kente fabric or patterns. This Kente identification knowledge, once established, distinguishes the master weavers from junior or novice weavers.

7.2.3 History and background knowledge

The Kente fabric is a cultural fabric and therefore has a rich historical background underpinning its production. The history and background knowledge have to do with the ‘know-that’ knowledge of the Kente fabric. Knowledge of the historical account of Kente fabric constitutes one of the indicators that are expected to be demonstrated by competent weavers. There is a century-year-old narrative taught in Ghanaian schools and the Bonwire community that points to two individuals (Opoku Kuragu and Kwakye Ameyaw) as being the inventors of the Kente fabric after observing a spider weave its web. Knowledge about these individuals who invented Kente weaving is absorbed from infancy for every weaver. Knowledge of the narrative of how Kente came into being is recognised as ‘must-have knowledge’ for a competent weaver. Kwadwo Afriyie, a junior weaver, acknowledges the point:

When we say that somebody is a competent weaver, it means that he knows everything about Kente. He knows how Kente weaving started in the olden days.

Oti Boateng, a junior weaver, reiterates the importance of this ‘must-have’ knowledge, in the following statement:

A competent weaver must know the history of Kente weaving.

Boateng’s statement implies that the knowledge of the history of Kente weaving is one of the indicators that identify a competent weaver. Aside from the general history of Kente, it was observed that there is also background knowledge regarding some types of Kente fabric and patterns. The following observation from field notes (22 September 2021) illustrates the point:

I noticed that some of the Kente fabrics and patterns are named after the weavers who first wove such fabric or patterns. Also, there are stories of how some of the Kente patterns came into being. An example of such fabric is *Torku kra ntoma* (Literally means Torku’s soul fabric). The story is told that a fetish priest fore-told Torku that he would die the very day he finished weaving a specific fabric and it did happen. Hence, that specific type of fabric is named after him. I observed that being aware of such an account could prove how well-versed the weaver is in the history of the fabric history.

Awareness of the background knowledge concerning some fabrics, such as *Torku kra ntoma*, shows the depth of knowledge of the weaver regarding the Kente landscape. The competent weaver is distinguishable from the novice if he has this knowledge. The following field notes from 22 September 2021 give examples of the fabrics, especially if new names were allocated, as is sometimes the case:

Some of the fabrics were given new names. An example of such fabric is *Fatia fata Nkrumah*. The type of patterns that originally make up the *Fatia fata Nkrumah* was formerly called *Obaakofoɔ mmu man*.

From the observation, it is understood here that renaming does happen in the Kente landscape, knowledge of the fabric that has been previously renamed amount to knowledgeable of the history and background.

7.2.4 Quality determination knowledge

The knowledge to determine the quality of a woven fabric is ‘must-have knowledge’, and this knowledge identifies a competent weaver. Kwadwo Afriyie, a junior weaver, shares his definition of a competent weaver:

A competent weaver is able to determine the quality or otherwise of a Kente fabric.

Afriyie’s statement above shows that one of the capabilities of a competent weaver is that, he can pass judgment about the quality of a woven fabric. The following field notes (16 September 2021) illustrate this point:

I observed that some weavers including master, junior or even some novice weavers have the know-how to determine the quality of a Kente fabric. They hold or look at the woven fabric and pass judgment as to whether it is woven properly or not.

The observation above describes how quality is determined. It is noted that the competence weavers pass their judgment by examining the fabric using bodily or visual analysis. It is implied that by touching or gazing at the fabric, competent weavers examine the features of the fabric to

determine its quality. According to Sabutey (2009:17), through visual analysis, the weaver makes a value judgment depending on the presence or absence of certain elements. The ability of some novice weavers to determine the quality of woven fabric attests to the importance of quality determination knowledge as one of the elements that constitute competence. In other words, the development of the ‘know-how’ by some novices in the Kente-weaving landscape in the determination of quality confirms the need for competent weavers to be also capable of.

7.2.5 Yarns and colours combination knowledge

Knowledge of the yarns, and how to blend colours in the weaving of the Kente fabric, is considered one of the indicators that constitute competence. The competent weaver is expected to know much about the yarns; the type of yarns and their uses. Kwaku Marfo, a master weaver, states:

A competent weaver should know much of the yarns that are used in weaving Kente. Some of the yarns are soft, others are hard. He should know what the soft and hard yarns are respectively used for.

Marfo’s statement shines a light on some of the attributes of the yarns. Here, it is known that some of the yarns are soft whereas others are hard. Both hard and soft yarns have their uses. It is expected that the competent weaver is abreast with this knowledge. Concerning the type of yarns and their uses, the following observation was made in the field notes (23 June 2021):

I observed that cotton yarnsare mostly used as the warp; the rayon yarns are ... are mostly used as the weft.

The observed statement above gives an account of the type of yarns used in weaving Kente. Rayon being one of the yarns is used most often as weft, and cotton is used mostly as the warp. Since the yarns are in colour, it is expected that the competent weaver is abreast with the knowledge of colour blend. Ofa Owusu, a master weaver, had this to say:

A competent weaver should know how to blend colours and know which colour combination is best for which Kente fabric or pattern.

From Owusu's statement, it is known that there are colours that best suit certain types of fabrics or patterns. Kodzo (2017:9) and Sabutey (2009:114) refer to colours as an important element in the Kente-weaving landscape. Therefore, the competent weaver is expected to be aware of these colours. In support of the above statement, the following observation was made in the field notes (5 August 2021):

I observed that though weavers may use any colour for any fabric or pattern upon clients' request, there are traditionally preferred colours for some fabrics and patterns. I observed that for the *Fatia fata Nkrumah* the traditionally preferred colours are black or blue; *Adwini asa* are red, gold and green; *Torku kra ntoma* are white, red, blue and green; *Sika futuro* is gold.

There are traditional colours for some of the fabrics. The example of *Fatia fata Nkrumah* is given. In other words, unless the client requests specific colours for a specific occasion, the *Fatia fata Nkrumah* fabric is expected in black or blue. *Sika futuro* is expected to be in gold. *Torku kra ntoma* are white, red, blue and green. The competent weaver would have this knowledge regarding the colours.

7.3 MENTORSHIP CAPABILITY

The second theme in addition to Kente knowledge that constitutes competence in the Kente-weaving landscape is mentorship capability. Evidence of mentorship capability is acknowledged as one of the indicators that constitute competence. The capability to mentor novices and less experienced weavers is one of the indicators that are looked out for from persons who claim to be competent. Competent weavers should be capable of teaching others how Kente fabric is woven. Yaw Marfo, a master weaver, confirms this point:

Also, I have taught some people how to weave Kente. A competent weaver should be capable of teaching others.

A statement by Ohemeng Yeboah, a junior weaver supports this point:

The competent weaver knows Kente weaving and is able to teach others.

Examining Marfo and Yeboah's statements above, what is clear is that what constitutes competence is the evidence that the weaver has taught others how to weave Kente fabric. It appears that knowledge about Kente weaving is considered not enough unless the weaver is capable of teaching others. Hence, the demonstration of competence is constituted in the ability to mentor others. In other words, exercising the ability to teach others how Kente is woven is an attestation to the knowledgeability and therefore competence of the weaver. It is in this line that the following observation was made in the field notes (20 October 2021):

I observed that all the master weavers have apprentice(s) learning under them or have trained people in the past of which some are now master weavers with apprentice(s).

The master weavers meet the requirement of mentorship capability as they are currently training or have trained apprentices in the past. Master weavers can show that they are competent by their ability to train apprentices. Consequent to the mentorship capability of the master weavers, the following observation was made in the field notes (12 July 2021):

I observed a weaver showing a novice how to set a pattern on the warp. He stood beside the loom as the novice sat in, telling the novice how to set a pattern on the warp. When the novice could not get it, the master weaver sat on the loom and instructed the novice to look on as he showed the novice how to set a pattern in the loom.

The observation shows how a master weaver taught how patterns are set on the warp. A weaver can only teach when he knows. Hence, the competence of the master weaver is partly expressed in his ability to teach the novice weaver how patterns are set on the warp in the loom.

From the analyses above it appears that the master weavers as competent weavers in the Kente-weaving landscape. This is because the competent weavers are expected to demonstrate Kente knowledge and mentorship capability that only master weavers can. The analyses show that there are levels of competence among the weavers. While the master weavers can demonstrate knowledge of all the indicators that constitute competence, the junior and novice weavers are only expected to demonstrate some of the indicators that constitute competence. Besides, depending on the kind of Kente knowledge, a weaver may be competent in the performance of some of the procedures and techniques, but deficient in others.

7.4 ACCESS TO KENTE INFORMATION

By understanding information literacy from the socio-cultural perspective where information literacy is understood as a means of learning through accessing and using the sanctioned and valued information to attain mastery of the practices in an information landscape through participating in activities, procedures and interactions (Lloyd 2006a:570,575,578; Lloyd 2006b:570), the findings to research question two, namely, ‘How do novices becoming competent weavers is enabled by information literacy in the Kente-weaving landscape’, show that novices becoming competent Kente weavers are enabled by access to Kente information resulting from their exposure to the cultural and transformative processes in the Kente-weaving landscape. The cultural and transformative processes are the routine or the integrative practices the novice weavers are exposed to, to access the Kente information required to make them information literate and therefore competent in the practices in the Kente-weaving landscape. Here, information literacy is understood from the ideological perspective where the focus is on what the weavers do and count as knowledge (both the ‘know-how’ and ‘know-that’ knowledge) or knowledgeable practices in the Kente-weaving landscape. Influenced by the notion that “regardless of how we come to know, when we do, we become information literate” (Lloyd 2006a:578), the findings show that becoming a competent weaver is underpinned and enabled by Kente information literacy where Kente information is accessed to make the novice weaver develop the understanding and practical knowledge (skills) thereby making him competent in the Kente-weaving landscape.

The findings show that developing the ‘know-how’ and the ‘know-that’ knowledge of what the weavers do in the Kente-weaving landscape (transitioning a novice weaver to become a competent weaver) is enabled by access to the Kente information afforded through the lived actions of performing both the on-the-loom and off-the-loom practices (techniques and procedures). Alluding to Lloyd (2011:285-292), the findings of this study show that both the performance of the off-the-loom and on-the-loom practices constitute an information practice, a collection of information-related *doings* and *sayings* that are socially and materially mediated to enable learning and understanding of the Kente-weaving craft or the Kente-weaving landscape.

The findings show that Kente information encapsulates access to the off-the-loom information and the on-the-loom information. This is presented subsequently:

7.4.1 Access to off-the-loom information

The off-the-loom information encapsulates the sanctioned and valued Kente information that is accessed outside the loom in the Kente-weaving landscape. This includes access to information on history and background, practices (procedures and techniques) performed outside (off) the loom. These practices involve weft preparation, warp preparation as well as heddling and reeding of the warp. These practices are the heritage and cultural activities performed outside the loom, to which the novice weaver must be exposed to learn and transition to become competent in the Kente-weaving landscape. The information related to the performance of these off-the-loom practices and all those which are accessed outside the loom is what is termed the off-the-loom information. The findings of this study show that it is essential that those novices becoming competent weavers are well-versed in the off-the-loom information. It is presented as follows:

7.4.1.1 Weft preparation information

Becoming competent in the weft preparation practice (technique) is enabled by access to the weft preparation information. The novice weavers are afforded information on how the weft is prepared in the Kente-weaving landscape before they develop the ‘know-how’ knowledge on how it is done. Weft preparation encapsulates the process of winding yarns onto the bobbins and inserting them in the shuttle. Yaw Marfo, a master weaver said:

The actual weaving work starts with the winding of yarns on the bobbins. First, I teach the novice how to wind yarns on the bobbins using a bobbin winder.

The thought behind Marfo’s statement is that master weavers deliberately share information with novice weavers to make them information literate on how to wind yarns onto the bobbins using the bobbin winder. The yarns that are wound or wrapped onto the bobbins are the yarns that are used as the weft when weaving. Learning how to prepare the weft by wrapping/winding yarns

onto the bobbins is one of the practices (techniques) novice weavers access information on early in their learning trajectories. Yaw Oppong, a novice weaver, agrees:

I started with how to wind yarns on the bobbins. Learning how to wind yarns on the bobbins is what almost every learner begins with.

In the above statement, Oppong narrates his learning trajectory in which he refers to the information access on the winding of yarns onto the bobbin as the first technique or practice he learnt. As the master weaver teaches, the novice weaver accesses the valued information on how yarns are wrapped onto the bobbins. Osei Opoku, a novice weaver, illustrates the point:

The first thing I learnt is the style of winding yarns on the bobbin. I had seen other weavers wind yarns on the bobbins. Oga was the one who sat me down to show me how to use the bobbin winder to wind yarns on the bobbins.

Osei Opoku, a novice, notes that he accesses information on how to wind yarns onto the bobbins from other weavers to know. Aside from seeing other weavers do it, someone deliberately showed him how winding yarns onto the bobbins is done (see figure 5.25). According to him, it is the first technique he learnt as a novice. The idea gotten from seeing the style or the technique others use to wind yarns onto the bobbins makes the difference in terms of understanding and becoming literate on how yarns are wound or wrapped on bobbins. It is implied here that an idea is a form of information that is accessed through the lived actions of other weavers. Hence, by observing weaving practices, the novice weaver accesses the necessary information to develop the 'know-how' knowledge of weft preparation. Lloyd (2009:415; 2010b:169; 2011:291) calls this type of information encounter corporeal information or affordance. Apart from the information shared through practical demonstration, novice weavers are given explicit information on how the weft preparation is done. Kwaku Duodu, a master weaver posited:

The first thing the novice learns is how to wind yarns on the bobbins. The novice is shown how the bobbin is inserted in the bobbin winder and how to wind to get the yarns on the bobbins. The novice is shown how to wind the yarns on the bobbins firmly. The novice is instructed to exert effort to stretch and hold firmly the yarn as it is being wound on the bobbin through the winding of the bobbin winder. The master weaver does it first to show the novice how to wind yarns on the bobbin using the bobbin winder. As the master weaver does it for the novice to see, he would tell the novice the 'dos' and 'dents' while winding yarns on the bobbins. The novice is

taught not to wind the yarns at the centre or near the end of the bobbin only but to spread the yarns evenly on the bobbin. The pressure from the winding of the yarns on the bobbins can cause cuts on the fingers if care is not taken. So we always advise the novices to cover their fingers with something before they wind the yarns on the bobbins.

The novice weaver is afforded information on how the bobbin is inserted in the bobbin winder and how the bobbin winder is used. It is demonstrated to the novice weaver to access the information on how the yarns are placed on the bobbins and wound. Out of the experience of the master weaver, the novice weaver is also given explicit information in the form of guidelines ('dos' and 'donts') on how to wind yarns properly on the bobbin winder. The information that is shared with the novice weavers helps them develop the 'know-how' knowledge and thereby makes them become information literate on how to wind yarns onto the bobbins. Kofi Oduro, a junior weaver, illustrates the point:

How I learnt Kente weaving was interesting. The preparation of the bobbin is the first thing every novice weaver would learn to do. My father showed me how to prepare the bobbin using the bobbin winder. He did it several times for me to see. He always inserted the bobbin in the bobbin winder and then placed the tip of the yarns on the bobbin and then held and wound the holder of the bobbin winder to get the yarns wound on the bobbin. So I was the one who used to wind yarns on bobbins for him.

Children are afforded information on how to wrap yarns on the bobbins from their relatives. As noted, in Oduro's case, the information affordance provided by his father was enough to make him competent enough to support his father in the wrapping of yarns to prepare the weft.

7.4.1.2 Warp preparation information

Another off-the-loom practice (technique) that the novice weaver accesses information on is warp preparation. In other words, developing the 'know-how' of warp preparation is enabled by access to information on how the warp preparation is done. Just like the weft preparation, novice weavers are afforded information on the warp preparation technique before they develop the 'know-how' knowledge on how it is done. Kwadwo Afriyie, a junior weaver, confirms this point:

The novice has to associate and mingle with a competent weaver to learn. As he associates with a competent weaver, he would see how the competent weaver prepares the warp.....for weaving.

Afriyie's statement above shows that novice weavers are exposed to warp preparation through their engagements with the lived action of competent weavers. Here, it is understood that the novice weaver accesses the information on warp preparation by observing how the master and other competent weavers in the Kente-weaving landscape do it. Kwaku Marfo, a master weaver, corroborates this point:

The warp preparation is difficult to learn. I learnt how to prepare the warp by following, assisting and observing my elder brother do it. He would hand over the bobbin carrier to me and tell me to do it as he did. He would observe as I do it and correct me when I made mistake.

Access to warp preparation information to gain the 'know-how' knowledge of warp preparation is obtained through assisting and observing as well as taking corrective feedback from competent weavers. In the statement, it is noted that Marfo got information on warp preparation from his uncle by observing him perform the techniques involved in warp preparation. It is evident that though challenging, the development of the 'know-how' knowledge in warp preparation is afforded by access to information through the enactment of warp preparation in the Kente-weaving landscape. The following field notes (5 October 2021) give more information on this process:

I observed that warp preparation is done with mathematical consideration with regard to the number of dents in the reed which is mostly a hundred (100). The number of yarns always has to be an even number. Warp preparation starts with erecting three sets of stands ('ntene nnua') in a straight line. One of the two end stands is made angular in shape. The middle stand is partitioned to ensure the yarns are not mixed up during the warp preparation. The yarns which are always in cones/bobbins are placed on the bobbin carrier ('akonam') and are stretched around the warp stands. The bobbin carrier is handled diagonally when stretching the yarns around the stands as shown in figure 5.26 to allow for easier spinning and releasing of the yarns. Upon reaching the angular stand, the weaver performs the technique called 'Kina hye'. Here, the weaver takes the yarns in pairs and geometrically crosses the yarns around one of two stands forming the angle where the yarns pass at the back of the other stand. The weaver repeats this process until he gets the desired length he wants. While on the warping stand, the different colours of yarns were tied separately together with a knot called 'Nyansapo'. The 'Nyansapo' knot is tied by holding the yarns from one of the stands and twisting it 360 degrees to tie and

folded geometrically. The ‘nyansapɔ’ knot is flexible and can be loosened or tightened just like a necktie.

The warp preparation is full of technicalities that cannot be described to the novice unless he experiences them. The ‘*Nyansapɔ*’ knot and the ‘*Kina hyɛ*’ technique are technicalities that connote information sources the novice weaver has to encounter and access to develop the ‘know-how’ of warp preparation. In terms of the technicalities in the warp preparation, information is afforded the novice weavers access. Kwabena Amoako, a master weaver explains:

I would first teach the person warping. I would do the warping of yarns for him to observe it. There are technicalities in warping that I would have to teach him. This technique includes the performance of the ‘*Kina hyɛ*’ technique. The ‘*Kina hyɛ*’ technique is the stretching of the warp through an angled stick.

As noted in Amoako’s statement, master weavers afford the information to novice weavers by doing it first for them to see as far as the technicalities involved in the warp preparation are concerned. By the lived action of the master weaver in the preparation of the warp, the novice weavers access and absorb the information on warp preparation to develop the ‘know-how’ in warp preparation. Unlike other master weavers, the first thing Amoako shows his apprentice to be literate in is the warp preparation by demonstrating how it is done for him to observe. It has been noted earlier that warp preparation is one of the most difficult techniques in the Kente-weaving landscape, yet it is the first practice or technique information is afforded to make his apprentices information literate in.

7.4.1.3 Heddling and reeding information

Heddling and reeding are the practices (techniques) that follow warp preparation. To develop competence in the Kente-weaving landscape, the novice weaver is supposed to demonstrate the ‘know-how’ knowledge of heddling and reeding. The novice weaver accesses information on heddling and reeding techniques before he gains the ‘know-how’ knowledge in the heddling and reeding techniques. Kankam Yeboah, a master weaver concurs:

After learning how the warp preparation is done, I would make sure the novice observes me pass yarns in the heddles and the reed so that he learns how to do it.

From Yeboah's statement, it is seen that to learn and become literate and capable of performing the heddling and reeding techniques, the novice weaver is allowed to observe to access the information on how it is done. The master weaver does it first and the novice weaver observes to learn how it is done. Kwame Bonsu, a junior weaver, elaborates on how a novice becomes competent in heddling technique:

Here, the novice weaver observes how the warp ends are passed through the 'eyes'of the heddles..... For every 'eye' of the heddles whether front or back, two warp yarns are passed through alternatively for the single weave. For the double weave, four warp yarns are passed through the 'eyes' of the first set of heddles front and back alternatively till the warp yarns are all used up. The four warp yarns are then divided into two pairs (two yarns each) to pass through the second pair of heddles just as in the single weave. If the warp yarns are not passed through the 'eye' of the front and back of the pair of heddles alternatively, it would be difficult to press down the treadle to open up the warp.

The novice weaver is afforded the information on heddling and reeding techniques by the lived actions of weavers in the Kente-weaving landscape. It is noted that novice weavers are exposed to the information of passing a pair of warp ends through the 'eyes' of the front and back heddles alternatively till they are all used up as demonstrated in figure 5.27. The weavers call each pair that passes through each 'eye' of the heddle, a 'gyesoa'. Aside from the heddling technique, novice weavers are exposed to the reeding technique. Kwabena Apam, a novice weaver, explains:

But for passing the warp through the reed..., my brother showed me. He showed me how to use a broomstick to pass the warp ends through the dents of the reed from one end and pull it from the other end using my finger.

Kwabena Apam, a novice weaver elaborates on the reeding information that has been accessed from the brother's demonstration. It is noted that Kwabena Apam got the tip or trick of how a broomstick is used in getting the warp ends through the dents of the reed as illustrated in figure 5.28. The tip or trick of how the broomstick is used and how the finger is used to pull the warp ends is a form or source of information that was accessed from the lived action of his brother as

he performed the reeding technique. To corroborate this point, the following observation was also made from the field notes (5 October 2021):

I observed that the warp ends are taken in a set of two pairs (making four warp ends), a pair each from both the front and back heddles. A set of two pairs (four warp ends) are placed through each dent of the reed till all warp ends are used up. I observed that a broomstick is used to do the reeding technique. The combined two pairs of warp ends are placed on the reed and the broomstick is used to push them through each dent and pull through from the other end of the reed.

The trick of how the reeding technique is done was experienced from the lived actions of weavers. Access to the information on how the reeding technique is performed affords information that enables the development of the ‘know-how’ knowledge in the reeding technique. It is noted that a set of two pairs of warp ends, referred to by the weavers as ‘*ɔba*’, pass through each dent of the reed.

7.4.1.4 History and background information

Another set of off-the-loom information weavers need to access is the historical background of Kente. The historical background information of Kente is shared in the Kente-weaving landscape. The historical background of Kente is part of the daily conversations of the Bonwire community. Novice weavers are afforded information about the history of Kente from their families. The following field notes (6 July 2021) attest to this point:

I observed that almost all the weavers have heard of the history of Kente. The weavers have relatives who are/were Kente weavers and have heard the history of Kente weaving from them. Also, it is part of the socialisation of the Bonwire community.

For persons coming from the Bonwire community, the first point of access to information about the history of Kente is social ties. The family is a source of information to novice weavers as they socialise and converse with the family before entering Bonwire Kente Centre. For Kwame Bonsu, a junior weaver, the novice weavers are deliberately shared with the historical background of Kente, and he adds:

There is a historical background to the Kente weaving. So the novice weaver would first be taught the history of how Kente began in the Bonwire community. The novice would be taught how Kente weaving has evolved to this modern day. The historical trends of what used to be done and what is currently being done as far as Kente weaving is concerned.

It is evident in the above statement that the history in terms of the originators or inventors of Kente weaving is shared with the weavers. Aside from this, the changes that have occurred since its invention to the present day are shared with novice weavers to make them information literate in the Kente-weaving landscape. It is along this line that the following observation was made in the field notes (6 July 2021):

The names of the people who first wove Kente in Bonwire were mentioned to me. Also, some of the equipment that were used in past were shown to me in the exhibition room to appreciate how Kente weaving used to be then and now.

The above statement gives information on how some of the historical background information was shared. Novice weavers would have to access this information to know the history of Kente.

7.4.2 Access to on-the-loom information

The finding of this study also suggests that novice weavers have to access the on-the-loom information to move gradually on to becoming competent weavers. The on-the-loom information is the sanctioned and valued information afforded in the loom that the novice weaver would have to access and use to develop the 'know-how' knowledge of the on-the-loom practices (techniques). The on-the-loom information encapsulates information on the stretch and tie-up techniques, pattern-setting techniques, weaving techniques, challenges and defects fixing. This on-the-loom information is presented in 7.4.2.1 to 7.4.2.4.

7.4.2.1 Stretch and tie-up techniques information

The stretch and tie-up techniques are performed to set up the loom to begin the weaving of fabric. The 'know-how' knowledge to stretch and tie up the warp in the loom is one of the

practices (techniques) the novice weaver has to learn to develop competence in Kente weaving. Ofa Owusu, a master weaver, reiterates the sharing of stretch and tie-up information between competent weavers and novices:

I would also show the novice how to stretch and tie up the warp in the loom and on the drag stone.

The master weavers create the environment for the novice weaver to access information on stretch and tie-up techniques by showing them how to do it. Kwame Bonsu, a junior weaver, illustrates this point in the following statement:

After this, the novice weaver learns how to stretch and tie the warp to the cloth beam and the drag stone to start the weave. Here also, the master weaver does it at the first instance for the novice to see.

From Bonsu's statement above it is clear that the novice weaver learns and develops the 'know-how' as he sees the master weaver does it. Concerning how the stretch and tie-up techniques are done in the loom, the following observation was made in the field notes (11 October 2021):

I observed that the stretch and tie-up techniques involve making two types of knots namely 'Agonoyɛ' and 'Nyansapɔ'. The Agonoyɛ knot is tied around the reed to the cross beam. The Agonoyɛ knot is an adjustable knot that enables the reed to be positioned or adjusted to suit the weaver. For the heddle, both the 'Agonoyɛ' and 'Nyansapɔ' knots are tied at one end each through the pulley on the cross beam as illustrated in figure 5.4. Also, I observed that the stretch and tie-up techniques involve pulling the warp through the reed and performing a technique called 'Eterebo'. The 'Eterebo' technique involves dividing and making three 'Nyansapɔ' knots from the warp on a wooden bobbin against the cloth beam as illustrated in figure 5.30. After the 'Eterebo' technique, 'Nyansapɔ' knot is tied on a wooden stick called 'Abotidua' to the drag stone.

To develop the 'know-how' knowledge in the stretch and tie-up techniques, the novice weaver is expected to have encountered or accessed information on how the 'Agonoyɛ' and 'Nyansapɔ' knots are tied to the reed, heddles, cloth beam and the drag weight (stone). Access to this information can only be realised when the novice weaver experiences the lived actions of the weavers in the Kente-weaving landscape. In other words, the novice weaver has to access this information corporeally to develop the 'know-how' of 'Agonoyɛ' and 'Nyansapɔ' knots.

7.4.2.2 Patterns-setting information

The literacy to set patterns on the warp is instrumental in the consideration of competence in the Kente-weaving landscape. Unlike the single weave where patterns are not woven on the fabric, patterns are set and woven in the double weave. Before the novice weaver develops the ‘know-how’ knowledge and becomes literate to set patterns on the warp, he is shown how the setting of patterns is done. Kofi Oduro, a junior weaver, makes this statement:

There is no pattern in the single weave. ... There are patterns in the double weave. The novice weaver is first shown how to programme the patterns on the warp. For example, the master weaver would show the novice weaver that for this particular pattern, we do it this way; you raise one warp yarn and three warp yarns down, you then pass a different nylon thread over and under the warp yarns then you tie it up to the cross beam.

The double-weave technique involves the making of patterns on the fabric. The novice weaver would have to access the information on how patterns are set on the warp to develop the ‘know-how’ knowledge. Oduro’s statement attests that the master weavers would demonstrate to the novice weaver for him to access the information on how to do pattern setting. Pattern setting involves the technique called ‘key’ selection. The novice weaver is introduced to how to do the ‘key’ selection technique. Kwame Bonsu, a junior weaver, comments on this process:

The novice weaver is introduced to the ‘keys’ in setting up the patterns. The ‘keys’ involve mathematics in the determination of which warp yarns to raise or lower for a specific pattern before tying to the cross beam. When the novice weaver becomes perfect in setting up patterns, he can set and weave any patterns he wants.

The introduction of novice weavers to the ‘key’ connotes the sharing and access to information on the ‘key’ selection technique. The above statement gives the information that the ‘key’ selection involves the raising, lowering and subsequent tying of the warp. Concerning how the ‘key’ selection technique is done, the field notes (11 October 2021), reflect this observation:

In the selection of ‘key’ for the pattern setting, I observed that the right treadle is pressed down using the right foot. This opens the warp into two halves; one up, the other down. The up-half of the warp is worked on first. With the up-half, I observed that the pair of warp (‘gyesoa’) in the

first dent of the reed from the right is raised; the two pairs of warp ('oba') in the next two dents of the reed are lowered. Then, the next pair of warp in the next dent of the reed is raised and the two pairs of warp that follow in the next two dents of the reed are lowered. This process continues till all the up-half of the warp has been used up. It is then tied upward on the warp closer to the warp beam. After the up-half of the warp had been worked on, the down-half of the warp is worked on. I observed that with the down-half of the warp, the process was the opposite of what was done with the up-half of the warp. Instead of raising the pair of warp ('gyesoa') in the first dent of the reed and lowering the two pairs ('oba') in the next two dents of the reed as was done with up-half, it was done the other way round where the pair of warp in the first dent of reed from the right was lowered. Unlike the up-half of warp, the down-half is tied downward. Patterns cannot be woven on fabric without the selection of a 'key' on the warp.

The above statement describes how to do the 'key' selection technique. It is evident from the description that the novice weaver would have to observe the 'key' selection technique to fully understand. In no way can a person develop the 'know-how' knowledge in a pattern setting without experiential access to the information on how is done through observation. In other words, the sharing of information through the oral narration of how the 'key' selection technique is done is not enough in the development of the 'know-how' knowledge of pattern setting. Though most of the patterns setting involve the 'key' selection technique, there are few like the '*Akyem*' pattern, which do not involve the 'key' selection technique. The following field notes (11 October 2021) give the detail regarding the setting of the *Akyem* pattern:

I observed that in the making of the '*Akyem*' pattern, the treadle is not pressed down as with those patterns which involve the 'key' selection technique. There is no 'key' involved in the making of the '*Akyem*' pattern. The warp in the first two dents of the reed is raised and the warp in the second two dents of the reed is lowered. The warp in the third two dents of the reed is raised and the warp in the fourth two dents of the reed is lowered down. In other words, the warp are raised and lowered alternatively from the first two and the second two dents of the reed till all the warp is used up. Those warp yarns that are raised are tied upward nearer to the warp beam.

The observed statement describes how the '*Akyem*' pattern is set. A picture of the '*Akyem*' pattern is shown in figure 5.22. Whether patterns setting involves the 'key' selection technique or not, the information on how the patterns are set on the warp would have to be afforded and accessed by novice weavers. This point is noted in the learning trajectory of Agyare Ansukun, a junior weaver:

For the setting up of patterns on the warp, I learnt from observing others do it here at the Kente Centre.

It is implied from the above statement that Ansukun got the information to develop the ‘know-how’ in patterns setting through the observation he made at the Kente Centre.

7.4.2.3 Weaving techniques information

The actual weaving starts when the weaver starts to make a fabric in the loom. To be capable of performing the action of weaving, the novice weaver has to access the weaving techniques information to develop the ‘know-how’ knowledge to weave fabric. Kwadwo Afriyie, a junior weaver, has this to say:

The novice has to associate and mingle with a competent weaver to learn. He would also see and learn from how the competent weaver weaves Kente fabric.

It is understood from the above statement that, becoming a competent weaver is underpinned by access to information from associating and interacting in the Kente-weaving landscape. Afriyie suggests that, as the novice weaver sees other weavers weave; the information he accesses on how they do it, makes the novice weaver learn to become literate in weaving. To corroborate the point on information access on weaving technique, Kwasi Appiah, a novice weaver, has this to say:

After doing this for some time, I was introduced to weaving where I started with single weave (‘Ahwepan’). My master told me to look on as he wove the single weave. He showed me when and how to throw the shuttle and put my feet on the treadle to weave by doing it himself. So after some time, he told me to try and see if I got it and whether I could weave. So I sat on the loom and tried under his watch and direction. I continued with the single weave for some time till my master was okay with how I was weaving Kente. He later introduced me to the double weave.

Some of the information the novice weaver would have to access to develop ‘know-how’ knowledge in weaving in the loom is on the shuttle and treadle use. The novice weaver accesses information regarding the usage of the shuttle and treadle through the lived action of the master

as he uses them to weave. The weaver is granted the opportunity to prove that he has successfully accessed and understood the information on weaving technique by demonstrating to the master. Kwasi Appiah was first provided with information on the single weave (*Ahwepan*) before he was introduced to the double weave. Concerning the types of weave and the order in which they are learnt, the following field notes (17 August 2021) observations were made:

I noticed that the single weave technique is easier to weave as compared to the double and triple weave. The triple weave technique is the most difficult technique to learn. The single weave is most often the technique novice weavers are first introduced to when learning. That notwithstanding, I noticed that some novice weavers were exposed to the triple-weave technique by their relatives at home and therefore first learn how to weave the triple weave before they gradually weave the double and the single weave techniques.

There are different learning trajectories, while some weavers learn to become literate in the easier weaving techniques first; others learn the most difficult techniques first. From the observation made in the field as stated in the above statement, some novice weavers were afforded information to learn the triple-weave technique first at home from their relatives before moving to the Kente Centre. Regardless of what the novice weaver learns first, whatever he learns to become a competent weaver is underpinned by the shared access to the required information on the weaving techniques to develop competency in weaving fabric.

7.4.2.4 Challenges and defects fixing techniques information

There are challenges and defects associated with weaving a fabric. These challenges and defects sometimes slow down the weaving process or even affect the beauty of the woven fabric. To become information literate and capable of fixing the challenges and defects associated with weaving a fabric, this study found out that novice weavers are afforded the lived actions of how to address and fix some common weaving challenges and defects. Agyare Ansukun, a junior weaver, explained this point in the statement below:

After some time, the master weaver would show the novice weaver how to fix some weaving challenges such as warp and heddles breaks. For the heddle breaks, the preceding nylon threads that make the ‘eyes’ of the heddles should be counted and separated to identify the specific thread to tie or fix. Mostly, for every ‘eye’ of the heddles, two warp yarns pass through, so when

there is a warp break, the specific warp yarn that is broken or torn would have to be looked for, trace through the reed, heddles and the set patterns and tied with the other end to continue the weave.

Agyare Ansukun describes some of the weaving challenges weavers are confronted with and how they are fixed. These weaving challenges include the warp and heddle breaks. It is noted in Ansukun's statement that the master weaver demonstrates practically to the novice weavers how the challenges of warp and heddles breaks are fixed. Implicitly, the demonstration affords information to novice weavers to get the trick of fixing warp and heddles breaks. Sika Afranie, a novice weaver, emphasises this point:

He showed me how to fix warp breaks in the course of weaving. He told me to look for the broken warp yarn and then pass it through the space of the heddle from which it got broken or torn to the reed before it is tied.

Sika Afranie got the information on how to fix warp breaks from the master weaver. It is seen in the statement that the master weaver gave him tips to look for broken warp yarns and pass them through the 'eye' of the heddle and reed before tying them with the other end. Such information given by the master weaver would increase the novices' 'know-how' knowledge. Kofi Mensah, a master weaver, had this to say about his learning journey:

At that time, I did not know how to prepare ... and fix warp breaks, so the master weaver used to do those tasks for me. So there was this particular day that my master was busy and could not make time to fix the warp breaks for me. He just described to me how to do it and I did it without any defect. That is how I learnt how to fix warp breaks. Since then,.... I fix the warp breaks on my own.

Kofi Mensah, a master weaver, narrates how he accessed information on how to fix warp breaks to develop the 'know-how' of fixing warp breaks. It is implied in Kofi Mensah's statement that information was given by the master weaver to the novice. Hence, having observed the master for some time, the warp-break fixing information shared by the master then appeared to be enough.

7.5 ACCESS TO THE WORKPLACE AFFORDANCE

The findings of this study in relation to research question three, namely, ‘How does the workplace interaction and participation deepen or enact novices’ information literacy in the Kente-weaving landscape?’, show that novice weavers’ information literacy is deepened by the affordance in the Kente-weaving landscape (workplace). As noted by Lloyd (2010b:170), affordance is information experience in the workplace through which formal, informal or incidental learning takes place. Affordance enables learning to take place through interaction and participation in the Kente-weaving landscape. This study confirms Billett's (2002:31) and Lloyd's (2010b:169) observations that affordance provides access to information. The affordance in the Kente-weaving landscape deepens novice weavers’ information literacy or competence. Novice weavers access information through the affordance of mentoring and guidance provision, conversations, observation and learning by doing.

7.5.1 Information affordance through mentoring and guidance provision

The Kente-weaving landscape provides the avenue for novice weavers to be monitored and guided. Yaw Marfo, a master weaver, explains:

Here, the sitting arrangement has been made in such a way that novices do not sit in one place; rather they sit around a junior or master weaver. Every novice sits nearer to a junior weaver or master weaver so that their work progress can be monitored by someone more advanced than them. This enables the novices to be noticed and corrected when they are making mistakes at the early stage. Master weavers at times go around inspecting the work of the novice and junior weavers to see whether they are doing the right thing.

The sitting arrangement enables master weavers to have access to novice weavers in terms of monitoring and inspecting their work progress to correct them when they make mistakes. As noted by Billett (2002:35-36), work practices provide advantages that enable direct and indirect guidance. Alluding to the work practices, the affordance to enable information access to novice weavers is provided through the sitting arrangement. The provision of correction connotes information access to the novice weaver in terms of deepening their ‘know-how’ to become competent or information literate in the weaving landscape. The access to Kente information

through guidance is not limited to apprenticeship only; being present at the workplace provides the opportunity to be guided by the competent weaver. Nana Agyei, a master weaver, acknowledges the role of guidance:

Here, every competent person or master weaver can teach any novice weaver whether he is his apprentice or not. When a novice is weaving Kente and he is not doing the right thing, and master weaver who notices would correct him on how to do it right, regardless of whether him being his apprentice or not..... For example, the other time when I reported to work, I noticed one novice weaver who was performing the tying-up technique in the loom. From how the novice weaver had done the tying-up in the loom, all the fabric he would have woven would have turned upside down. So I notified him and told him to stand out of the loom; I sat on the loom to do the correct tying-up technique for him.

Similar to Nana Agyei's statement, the following observations in the field notes (26 October 2021) reflect this:

When I sat on the loom to weave, the guidance that I received did not come only from the master under which I was an apprentice. Other weavers including junior weavers guided me and gave me directives on how to go about the weaving.

Novice weavers do not receive guidance from their direct masters only. Rather, any master weaver who notices a problem or fault with any novice weaver's work would provide guidance. An example is given in the above statement on how the master weaver afforded tying-up information to a novice weaver by demonstrating the method to him. Concerning guidance provided by master weavers, Kwasi Appiah, a novice weaver noted the following:

I am still learning Kente weaving; it is not everything that I know and am capable of doing. So the master weavers correct me when they see a mistake with the weaving works I engage in. You see that I have stopped weaving right now. I was told to stop the weaving by one master weaver. He saw some mistakes in my work that need to be corrected. He saw me struggling to tie up the warp yarns on the cloth beam. He told me to wait for my master as I do not have the experience to do it.

Similar to Kwasi Appiah's statement, Yaw Oppong notes that the presence of the master weavers enables novice weavers to access information through the mentoring and guidance they receive in the workplace. He had this to say:

As you see right now, I am surrounded by many competent weavers, so if there is anything wrong or amiss with my work or if I am facing any challenge, they would intervene and assist me. For example, many learners have a challenge in fixing warp and heddle breaks; they always need help from experienced weavers to show them how to fix them. That is how I learnt how to fix the warp and heddle breaks. I learnt how to fix themas he was assisting me to fix the warp and heddles breaks some time ago.

From Kwasi Appiah and Yaw Oppong's statements above, it is noted that master weavers intervene when novice weavers are confronted with challenges like warp and heddles breaks as well as tying-up technique difficulty. The intervention suggests the affordance of information to the novice weavers to learn how to address challenges like warp and heddles breaks. It is therefore no surprise that Yaw Oppong learnt how to fix warp and heddles breaks through this medium. It is implied here that the mentoring and guidance support that the master weavers provide in the Kente-weaving landscape affords novice weavers access to Kente information which in turn equips them to develop and deepen the 'know-how' or competence of weaving Kente.

7.5.2 Information affordance through observation and learning by doing

The opportunity to observe the Kente-weaving practices (procedures and techniques) allows novice weavers to improve their literacy of the Kente-weaving landscape. Ofa Owusu, a master weaver comments on the role of assistance:

Those of us who hail from this community have relatives who are Kente weavers. So we grew up seeing them weave Kente. So by assisting them we learn.

Weavers who hailed from and grew up in Bonwire have the advantage of having been aware of and perhaps participated in, the weaving practices. The exposure through observation suggests the benefit of information to novice weavers. Kwaku Duodu, a master weaver comments on the benefit of observation:

Through the engagement, novices who do not know how to set up the loom and pass warp through the heddles and reed can learn by seeing others do it.

The engagement in the Kente-weaving landscape provides novice weavers the opportunity to access information on how to set up the loom and pass warp through the heddles and the reed by observing how others do it. Apart from the heddling and reeding techniques, others learn the trick of weaving fast by observing weavers who have mastered the art of weaving quickly. Atta Sarfo, a junior weaver, gives his view on weaving quickly:

The master weavers keep us, the novice and junior weavers closer to them so that we may learn from them. I have learnt how to weave Kente at a fast pace. There used to be one master weaver here, he used to weave very fast. I aspired to weave as fast as he did. So I moved my loom closer to his so that I might be able to observe how he was able to weave at that very fast pace. By doing this, I was able to improve in terms of the speed at which I now weave. I learnt that to weave fast, the strap that links the heddle to the treadles should be kept shorter. If the strap is kept long it delays the weaver.

Observation provides the opportunity to learn the trick of how to weave fast. Getting the trick to weave fast, is information he accessed by observing that the strap that links the heddle to the treadles should be kept shorter. In addition, how to address and fix weaving challenges is learnt by observing how other weavers do it. Nana Nipa, a novice weaver attests to this:

I have also learnt how to fix warp and heddles breaks by..... observing other weavers do it.

How to set and make patterns is obtained from observing master weavers as they perform the pattern-setting technique. Oti Boateng, a junior weaver, explains how he learnt:

For me, it was out of my numerous visits to the Kente Centre that made me learn. After school, I used to come around to observe the weavers weave. It was out of that I learnt the weaving. ... I learnt the patterns making from observing my master weaver do it. In all cases, he does it first for me to observe.

The observation of how the weaving techniques are done connotes access to information that develops and deepens novice weavers' 'know-how' knowledge of Kente weaving. Some masters learn new techniques from junior and even novice weavers. Kwaku Marfo, a master weaver, comments on learning from less experienced weavers:

Certainly, though I am a master weaver, it was here that I learnt how to set up patterns on the warp. I mean the double weave technique where warp yarns are selectively raised and lowered and tie up to set the patterns. This type of double weave is new here. I learnt this technique of pattern set-up from some junior weavers; they introduced it here. Many of the master weavers learnt this technique of pattern set-up by observing the junior weavers do it. I learnt the trick of setting up patterns on the warp from some of the junior weavers here.

I must say that I have surprisingly learnt something new from my apprentice. I was surprised at how he could wind yarns firmly on the bobbin. So I observe him do it one time and got the trick.

It is evident from the statement that the access to information to increase 'know-how' is not always one-directional where the master weavers provide information to the novice weavers. However, more often than not, it is the novice weavers that access information from the master weavers to expand their knowledge of the work practices in the Kente-weaving landscape.

Aside from observation, information is accessed by novice weavers through learning by doing. The act of learning by doing provides novice weavers the opportunity of gaining experience in Kente weaving. Learning by doing, gives the novice weavers practical information on what they have been observing at the Kente workplace. Kankam Yeboah, a master weaver, acknowledges this point of practical application:

After some time, I would allow the novice to try all that I have been showing him.....; the winding of yarns, warp preparation, and passing of yarns in the heddles and the reed.

In the above statement, Kankam Yeboah, a master weaver narrates how he enables his apprentice to access information by allowing them to put into practice what they had been observing him do. Among the activities novices learn to do by getting involved and performing are the winding of yarns on the bobbins, warp preparation, heddling and reeding. This enables novice weavers to gain practical experience. Experience is gained through accessing corporeal information by participation. As novice weavers participate in the weaving practices, they gain experience in the weaving practice. Kwadwo Afriyie, a junior weaver, comments on his experience with practical involvement:

I used to sit around and observe him as he wove Kente fabric. After observing him for some time, he gave me the chance to sit on his loom to practise what I had been observing. He always stood beside me..... He showed me how to reverse the weave anytime he realised that I made a mistake. The chance he gave me to sit on the loom to practice what I have learnt from observing him helped me to gain experience to weave Kente properly.

Kwadwo Afriyie's statement suggests that master weavers observe the novice weavers as they try to perform the weaving practices and practically increase their information literacy of Kente weaving. In other words, master weavers can make a judgment on the information novice weavers are lacking to afford them or correct them to develop or deepen their 'know-how' of weaving Kente. The opportunity to do or practise what has been observed is a way to access information and gain experience in that it provides novice weavers the opportunity to make mistakes but also to learn from their mistakes. Owusu Adonten, a novice weaver, gives his view on learning by doing:

I remember that I pleaded with one weaver to allow me to help him with the winding of yarns on the bobbins when I saw him doing it. Through the chance, he gave me I mastered how to use the bobbin winder to wind yarns on the bobbin.

Adonten's statement attests to how the 'know-how' use of the bobbin winder is practised and improved. It is evident from the samples of extracts above that novice weavers access information to increase their 'know-how' knowledge of the Kente-weaving practice through observing and learning by doing the practices of the workplace.

7.5.3 Information affordance through workplace conversations

Novice weavers' presence in the Kente-weaving landscape, interacting and participating in the practices of the workplace provides novice weavers the opportunity to access Kente information through listening and hearing conversations about Kente to improve their 'know-how' and thereby make them competent in the Kente-weaving landscape. The conversations in the Kente-weaving landscape provide opportunities for novice weavers to ask questions to increase their understanding of the practices of the workplace. Nana Agyei, a master weaver, comments on the benefit of conversation:

Our conversations help a lot in imparting Kente-weaving knowledge to the novice weaver. The conversation paves way for the novice weaver to ask questions concerning things he does not understand for answers. The novice weaver is free to ask any master weaver about Kente weaving he does not understand. Our conversations here give the novice weavers more information about Kente weaving.

The conversations assist novice weavers to increase their understanding of the weaving practices. Conversations also pave the way for novice weavers to solicit information from master weavers. During conversations, novice weavers are free to ask questions to access the necessary information to deepen their knowledge of the weaving practice. Aside from soliciting information by asking questions, information can also be accessed by overhearing the conversations of other weavers. Kwadwo Afriyie, a junior weaver, explains the benefits he gained from conversations and overhearing other weavers talk:

Also, I learnt from other weavers' conversations on how to make Kente fabric beautiful when weaving. I overheard them say selecting short warp intervals or keeping the warp closer to one another when programming the patterns on the warp makes Kente fabric beautiful after weaving. I did it and I realised it was so.

In conversing in the Kente-weaving landscape, comments that improve novice weavers' 'know-how' knowledge are extremely helpful to novices. Kwame Bonsu, a junior weaver had this to say:

Master weavers most often comment and pass judgment on woven fabric. If a woven fabric is of quality or otherwise they would say it. For example, if a weaver does not beat up the fabric well to make it compact when weaving, he would be chastised and criticised by the master weavers for weaving inferior fabric. Such comments or judgments master weavers pass on a woven fabric help novice weavers know what constitutes a well-woven or quality fabric.

Concerning weaving a quality Kente, master weavers sometimes give comments on other weavers' works while in the action of weaving in the loom. Kwabena Amoako, a master weaver, comments on the benefits of taking advice:

Sometimes you may hear somebody say to a weaver on a loom to beat up the fabric at a particular point to get the compactness of the fabric ('ntoma wei dee, bɔ so ma no nyɛ den'). In

such an instance if an apprentice hears this statement to beat up and sees the subsequent action thereof, he would learn how beating up using the reed is done to get desired compactness and weight of a woven Kente fabric.

The sharing of weaving advice to novice and junior weavers does sometimes happen. The act of sharing advice affords novice weavers the opportunity to expand their insight concerning a specific technique. The above statement suggests that sharing information concerning how to beat up the fabric to get compactness is most helpful to novice weavers. In addition, the conversations focus on the tools in the Kente-weaving landscape. The conversations that focus on the tools assist novices to learn the names and uses of the tools. Oti Boateng, a junior weaver, gives his view:

Through mingling with the weavers here, the novice weaver can know the name of the tools as they would be mentioned and used to produce Kente.

The tools of the weaving practice are part of the daily conversations in the Kente-weaving landscape. The statement suggests that through conversations, information on the names of the tools and their uses is shared with novices. Aside from the tools, there are conversations around the patterns and history of the Kente fabric. This is reflected in the field notes (6 July 2021):

I noticed the names of the Kente fabrics and the embedded patterns are part of the daily conversations. These names are mentioned when weavers are conversing with clients and sometimes among themselves. Names of the various Kente fabric and patterns are also mentioned to tourists in the Exhibition room. I noticed that the conversation around the names of the fabric and patterns imparted me as it was through that I got to know some of the names of the fabrics and their embedded patterns.

The conversations among weavers and weavers with clients and tourists afford novice weavers the opportunity to learn the names of the fabric and their patterns. The extracts referred to above corroborate the point that the presence of novice weavers at the workplace interacting and participating in workplace activities enables them to access Kente information to broaden their knowledge as far as Kente weaving is concerned.

7.6 LEARNING TO USE TOOLS

For research question four, which seeks to investigate how becoming information literate relates to material objects in the Kente-weaving landscape, the findings of this study show that becoming information literate in relation to the material objects in the Kente-weaving landscape relates to learning to use the tools. Becoming a competent weaver or information literate relates to learning how to use the tools in the Kente-weaving landscape. Developing the 'know-how' of using the tools attests to information literacy in the Kente-weaving landscape. Kankam Yeboah, a master weaver concurs:

Yes, becoming a competent weaver has a relationship with the tools and equipment we use over here. The competent weaver must know how to control and use the tools.

There are specific ways of using the tools and materials in the Kente-weaving landscape and the novice weaver is expected to become versed in how to use them. The novice weaver is expected to learn the sanctioned ways to use the tools and materials in the Kente-weaving landscape. To corroborate this point, Kwabena Amoako, a master weaver has this to say:

So the competent weaver should know how to practically use all the equipment and tools used in Kente weaving.

The need for the novice weaver to learn the practical use of the tools in the Kente-weaving landscape is emphasised in Amoako's statement. It is implied from the statement that an attribute of an information literate person in the Kente-weaving landscape is his ability to use the tools of the landscape. The weaver is expected to be capable of using tools such as the shuttle and the treadles. Yaw Marfo, a master weaver, emphasises the importance of knowing how to use the shuttle and the treadles:

The weaver has to know how to handle and throw the shuttle through the opening of the warp yarns. The weaver must know how to use his feet to press the treadles.....

Similar to Yaw Marfo's statement, Kwadwo Afriyie, a junior weaver, has this to say:

We have a way to handle the shuttle. ... Also, you should know how to press down the treadles.

Both Yaw Marfo and Kwadwo Afriyie's statements indicate that there is a way to use the shuttle and treadles and the novice weaver must learn. Extant studies show that the picking technique, which is the technique of repeatedly throwing the shuttle loaded with bobbins through the shed as a result of pressing down the treadles, is key to weaving Kente (see Adom 2016; Amissah & Afram 2018:101; Fiadzo 2010:16). The picking technique is shown in Figure 5.31. Learning how to use the shuttle and treadle is informed by the access to information in the Kente-weaving landscape. Nana Nipa, a novice weaver, shares his view on using the shuttle and the treadles:

The competent weaver must know the style by which to throw the shuttle through the warp. He should also know the style by which to press down the treadles.

The novice weaver must be informed of the style of handling and using the shuttle and the treadles. Kofi Mensah, a master weaver, shares how the shuttle and treadles should be handled and used:

The shuttle is handled with the thumb on the shuttle bar while the index finger is placed on the end of the shuttle. Then the remaining fingers are placed under the shuttle bar. The fingers should not touch the bobbins in the shuttle so that the bobbin can wind around and release yarns when throwing the shuttle through the warp. If the shuttle is not handled this way, the bobbin would be impossible to wind up to release yarns through the warp. With your feet, you have to learn how to match your feet and hands to move at an equal pace so that the shuttle can be thrown through the warp perfectly. The threads that hold the treadles should be in-between the big toes and next toes for both the right and left feet so that the treadles would not slip when they are being pressed down.

Information regarding the proper way to place the treadles in between the toes is shown in Figure 5.10. This information has to be observed to learn the proper way to handle and use the shuttle and treadles. Learning the tools use is associated with the correct movement and turning of parts of the body. This point is illustrated in Kwaku Duodu's statement below:

In weaving, the shuttle is thrown from right to left and vice versa. At the same time the weaver throws the shuttle from the right to the left, he has to exert effort on the right foot to push the right treadle down concurrently to open up the warp for the shuttle to be thrown through to the left. Similarly, from the left to the right, the weaver has to exert pressure on the left foot to push the left treadle down concurrently to create an opening of the warp for the shuttle containing the weft yarn to pass through. To be able to throw the shuttle through the warp, the weaver has to know how to open up the warp through the use of the feet on the treadle. It is the same process we perform to weave patterns or make designs on the Kente fabric. When the shuttle is on the left the weaver uses his left foot to press the left treadle down to make a weave and vice versa when it is on the right. If the weaver uses his left foot to press the left treadle down while the shuttle is on the right of the warp, it means that the weaver has committed an error and is reversing the weave. So when the shuttle is on the right of the warp and you press down the left treadle, it means you are reversing a weave.

Knowing or becoming information literate in relation to the shuttle and the treadles, the novice weaver must learn to develop the skills of how to throw the shuttle through the warp from right to left and vice versa while at the same time pressing down the right and left treadles alternatively to create the shed or open up the warp. In learning the tools use, the novice weaver must learn to develop skills of how to use the hands and feet to perform techniques that involve the tools. Such skills that involve the movement of parts of the body are motor skills. Extant studies have already noted that craftwork involves the development of motor skills (see Newell 1991:214; Tarja 2016:4; Veeber, Syrjäläinen & Lind 2015:22; Yliverronen & Seitamaa-Hakkarainen 2016:2). Like the shuttle and the treadles, there is a skill to learn to correctly use the swordstick. Owusu Adonten, a novice weaver, addresses this in the following statement:

There is also a way to handle and use the swordstick to open up the warp for the set patterns. The wrist is twisted backward like 'gasing' up a motorcycle to open up the warp for the weft. One student from the university came to weave. He claimed that he was a competent weaver, yet he did not know how to handle and twist the wrist to open up the warp with the swordstick. He did it the opposite way; he twisted his wrist forward instead of backward to open up the warp. After many attempts, he failed to open up the warp as the swordstick kept dropping back.

The inability to twist the wrist backward proves the lack of 'know-how' as far the swordstick use is concerned. Agyare Ansukun, a junior weaver, explains the importance of learning how to use the reed:

Many novice weavers do not know how to handle the reed. No matter what, when you are learning to weave, you would likely handle the reed from the top. The reed is handled from the

side if the weaver wants to weave faster. Here, the weavers handle the reed from the side. Until I came here and learnt from the other weavers, I used to handle the reed from the top. I have learnt that it is better to handle the reed from the side than from the top.

The proper way to handle the reed is by the side when beating the fabric. The above statement underscores the need for novice weavers to learn to hold the reed from the side to weave faster. In learning about tools use, it is essential that the focus is on developing the ‘know-how’, rather than learning the names of the tools.

7.7 UNDERSTANDING CUES

Concerning research question five, namely, ‘How does the human body enable information literacy in the Kente-weaving landscape?’, the findings of this study show that the body facilitates *knowing* by understanding and making meaning of the cues afforded it from the interaction and participation in the Kente-weaving practices. Cues are the informative signals the body gives through the senses and enables understanding of the daily weaving practices of the workplace. Kwaku Duodu, a master weaver, explains the importance of experience in the weaving landscape

Regardless of the number of years spent in weaving, the finishing of the fabric tells it all as to whether the maker is a master or a novice. Fabrics woven by most novices are fluffy as they do not trim the fabric after weaving. Also, the fabrics woven by novices have frayed selvage (‘atwuntwum’).

The cues to determine the quality of the fabric are evident from its finishing features. Visual cues of low-quality fabric are the appearance of bits of fluff and frayed selvage on the fabric. Duodu’s statement implies that the eyes should be trained to identify bits of fluff and frayed selvage. The presence or absence of bits of fluff and frayed selvage on fabric is a cue for determining the quality of the fabric. Hence, the presence of features such as frayed selvage defects on a fabric means that the fabric is poorly woven. In addition, the presence of bits of fluff and frayed selvage on a piece of woven fabric signals that the maker is a novice. The smoothness of the fabric is also a cue that signals well-woven fabric. Atta Sarfo, a junior weaver, states:

I can tell from a fabric whether it was woven well or not. Though it depends on the type of fabric or the embedded patterns, when the surface of the fabric is smooth it means it was woven well; if the surface of the fabric is rough, it means it was not woven well. If the surface of the fabric is smooth it means the weaver beat up the fabric well when weaving, but if it is rough, it means the weaver did not beat up the fabric well. When pieces of yarn appear on the surface of the fabric it means that it is rough.

The smoothness or roughness of the fabric indicates its quality. Whereas the smoothness of the fabric signals that the fabric is of high quality and was well beaten up; the roughness of the fabric means that the fabric is of poor quality and was not beaten up well during the weaving process. The use of the eyes and the skin is how the quality of the fabric is determined. This point is attested to in the following statement:

A competent weaver can determine from the look and feel of Kente fabric and tell if it is lower quality or not. For the look, for example, when there are broken ends ('Efoɔ') in the woven fabric, it shows that the fabric is lower quality and that the weaver could be a novice. The broken ends ('Efoɔ') occur as a result of warp breaks.For example, if there is a heddle break, and it is not fixed, it would cause a defect called a float. This is where the weft yarn does not interlace the specific warp yarn for which the 'eyes' of the heddle have been damaged thereby causing the warp yarn to appear and hang on the woven fabric. So seeing some of the warp yarns appearing and hanging on the woven fabric attest it is of lower quality.For the feel, you can handle the fabric and feel it to determine if it has been woven properly. For instance, if it is heavier, it means the fabric was beaten up and compactly woven. It, therefore, suggests the fabric is of high quality. If the fabric is beaten up, it becomes compact and heavier. If it is light, it means the fabric was not compactly woven and that the weaver is a novice and the fabric is low in quality.

The appearances of broken ends ('Efoɔ') and floats on a piece of woven fabric are visual cues that the Kente fabric is of low quality. Seeing broken ends ('Efoɔ') and floats on a woven fabric are indications of warp and heddles breaks. It is implied from the statement above that, the presence of broken ends ('Efoɔ') and floats are signals that are understood by trained eyes that the fabric could be of low quality. The weight of the fabric provides a cue of the quality of the fabric. The feel from handling the fabric in terms of the weight signals information for judging its quality. It is understood that a heavier feeling signals high quality and a lighter feeling signals low quality. Kwadwo Afriyie, a junior weaver, explains:

I can look at Kente fabric and tell if the maker is competent or a novice. When I hold the Kente fabric, I can tell from the weight of the Kente whether it is quality or not. The quality of the

Kente fabric tells you whether the weaver is competent or not. If Kente fabric is heavier and compact it means that the Kente has been woven well. If the Kente fabric is light and easily bendable, it means that the Kente fabric is not compact and that it has not been woven well. The Kente fabric becomes compact when it is beaten up well with the reed during weaving. However, some master weavers intentionally do this to dupe their customers.

A heavier feeling from holding the fabric indicates a high quality of the fabric whereas lightness indicates low quality. A lighter feeling from the touch of the fabric suggests the reeding technique was not properly done as the fabric is not compact. Unless it is an intentional act by the weaver, it is suggested that the makers of such fabrics are novices. It is noted that the bendability of the fabric gives information on its quality. Whereas easily bendable fabric signals low-quality fabric, fabric being difficult to bend signals high quality.

There are also cues for determining the type of yarns in the Kente-weaving landscape. The cotton and the rayon yarns are identified by their ‘hardness’. Kankam Yeboah, a master weaver, comments on the yarn:

The cotton yarn is harder than the rayon.

The hardness of the yarn affords information to determine the type of yarn: cotton yarn is harder than rayon yarn. Kwabena Amoako, a master weaver, explains the different yarns:

Also, rayon yarn is softer and easier to tear apart as compared to cotton. To identify which is which, we take a single yarn to tear it apart. If it is torn with very little effort then that yarn is rayon. However, if the yarn is a little hard to tear apart, then that yarn is cotton.

The hand is used to tear the yarns into two. The hardness or softness of the yarn is determined by the effort applied to tear it apart. The cue for determining the type of yarn is provided by the effort it takes to tear it up.

There are also cues for identifying the various types of Kente fabrics or patterns. Apart from the raw or plain Kente fabric, which has no pattern, all other Kente fabrics have patterns in them. The types of patterns embedded in the Kente fabric are cues for identifying Kente fabrics. Kwabena Apam, a novice weaver, explains:

The patterns layout signals the name of the Kente fabric. Every Kente fabric has different patterns.

Kente fabrics are identified by the kind of patterns embedded in them. The patterns are of different shapes and layouts. The kinds of patterns found in a piece of Kente fabric are cues to its name. About the cues for identifying a Kente fabric, the following field note (6 July 2021) observations were made:

I observed that the Kente fabrics are identified by the embedded patterns. For example, I observed that the *Fatia fata Nkrumah* fabric is embedded with the following five patterns namely:

- *Babadua* pattern: This is a ‘square-ish’ shape with six horizontal or vertical partitions with different colours. The colours include black, green, red, and yellow in a square-like shape.
- *Apremu* pattern: This is a stepped shape at the four sides in a rectangular shape on the fabric
- *Rotoa* pattern: This is like the *Akyem* pattern with broken vertical lines
- *Nkyimkyim* pattern: This is a pattern with vertical zigzag shapes running through the fabric.
- *Npoankron* pattern: This is a pattern with two square-shape lines crossing each other diagonally to the four corners within a square or rectangular shape.

The cue for identifying the *Fatia fata Nkrumah* fabric is that it has five patterns as shown in Figure 5.16. *Fatia fata Nkrumah* fabric has the following patterns *Babadua*, *Apremu*, *Rotoa*, *Nkyimkyim* and *Npoankron*. The shapes of these patterns are described in the statement. These patterns are the identifying features of the *Fatia fata Nkrumah* fabric. However, it is noted that the patterns are not exclusive to any particular Kente fabric. In relation to this, the following field notes (6 July 2021), reflect this observation:

I observed that different Kente fabrics may have some common patterns in them. However, there is always a cue to identify one Kente fabric from the other. This cue could be the presence or absence of one or more patterns. Typical examples of such fabrics are the ‘*Fatia fata Nkrumah*’ fabric and the ‘*Wo sin wo yonko a wotaa wo*’ fabric. In these two fabrics, I observed that the ‘*Wo sin wo yonko a wotaa wo*’ fabric has four patterns of which three are found in the ‘*Fatia fata Nkrumah*’ fabric. These three patterns are the ‘*Babadua*’, ‘*Rotoa*’ and ‘*Nkyimkyim*’. The fourth pattern in the ‘*Wo sin wo yonko a wotaa wo*’ fabric which is not found in the ‘*Fatia fata Nkrumah*’ fabric is the ‘*Puduo*’ pattern. The ‘*Puduo*’ pattern is of a spider’s web shape.

The cue for identifying a Kente fabric with some common patterns is the presence or absence of specific patterns. It is evident from the observation that no two Kente fabrics are the same. Hence, the novice weaver has to train the ‘eyes’ to read the cues and to identify the patterns.

7.8 SUMMARY OF THE CHAPTER

Chapter 7 presents the findings of this study with the research questions. It begins by providing the findings in a tabular form stating the research questions and the corresponding findings in themes. The themes and sub-themes give a picture of how the information literacy practice takes place in the Kente-weaving landscape. To make sense of the themes, explanations supported by excerpts (direct quotes and field notes) are provided. The chapter provides information on what constitutes competence and how becoming a competent weaver is enabled by information literacy in the Kente-weaving landscape. From the findings, competence in the Kente-weaving landscape constitutes the demonstration of Kente knowledge and mentorship capability. Kente knowledge comprises the following:

- Know-how of the weaving procedures and techniques
- Know-how to identify Kente fabrics and patterns
- Familiarity with the history and Background of Kente fabrics
- Know-how to determine the quality of Kente fabrics
- Knowledge of the uses of the yarns types and colours

The findings show that the demonstration of the above Kente knowledge is underpinned by access to both the on-the-loom and off-the-loom Kente information. The access to both on-the-loom and off-the-loom information makes a person information literate and therefore competent in the Kente-weaving landscape.

The chapter also reports on how interacting and participating in the practices in the Kente-weaving landscape makes novice information literate. The material objects and the body concerning information literacy in the Kente-weaving landscape are also explained.

The subsequent chapter will provide a detailed discussion of the findings vis-a-vis the literature. The discussions of the findings in Chapter 8 are presented using a topical structure.

CHAPTER 8: DISCUSSION OF FINDINGS FROM THE KENTE-WEAVING LANDSCAPE

8.1 INTRODUCTION

Chapter 8 reviews the findings of this study. The reviews of the findings are linked to the existing literature as well as the conceptual framework for information literacy practice of weavers (i.e. Figure 8.1) of this study. The findings are presented and discussed in five sections as follows:

- The elements of competence.
- How becoming a competent weaver is enabled by information literacy.
- Workplace interaction and participation and how this expands novice weavers' information literacy of workplace practices.
- The connection between material objects and information literacy.
- How the body enables information literacy.

The principal outcomes of this study are considered in the review of the findings. The claims derived from the empirical data are discussed with reference to the literature. The discussion on the transition from a novice weaver to a competent weaver is tied to the conceptual framework for information literacy practice of weavers.

8.2 THE ELEMENTS OF COMPETENCE

Competence relates to knowledge in a context-specific setting operated by a group of people (Nonaka & Takeuchi 1995:87; Wenger 1998). In the context of the Kente-weaving landscape, becoming a competent weaver relates to the 'knowledgeability' in Kente weaving and its related aspects. From the findings, there are two elements of competence. The first is the demonstration of Kente knowledge; this is demonstrated in terms of the following: knowledge of weaving, identification knowledge of Kente patterns and fabric, knowledge of the historical background of Kente, knowledge of quality determination, and knowledge of yarns and colour combinations.

Kente knowledge can further be grouped into ‘know-how’, ‘know-that’ or ‘know-why’ knowledge; making the findings of this study consistent with Yliveronen and Seitamaa-Hakkarainen’s (2016:2) argument that competence in craft represents ‘know-how’, ‘know-why’ and ‘know-that’ knowledge. For the ‘know-how’ knowledge, the findings show that the competent weaver is supposed to have practical knowledge of the weaving practices (procedures and techniques). Alluding to Dombrowski, Rotenberg and Bick’s (2013:38-44) notion of practical knowledge as skills, the findings of this study show that competence constitutes the demonstration of the contextual skills in the weaving procedures and techniques. According to the findings of this study, having theoretical or conceptual knowledge of the weaving procedures and techniques is not enough. The competent weaver must demonstrate the contextual skills of the weaving procedures and techniques as sanctioned within the socio-cultural and historical context of the Kente-weaving landscape. The findings show that competence is demonstrated in the capable performance of all the weaving procedures and techniques in the production of Kente fabric from start to finish as sanctioned by the context of the Kente-weaving landscape. Participants such as Kankam Yeboah, Kwame Bonsu, and Nana Agyei demonstrate the importance of the capable performance of all the weaving procedures and techniques. Yeboah, Bonsu like Agyei all agreed that the demonstration of Kente knowledge is evidenced in the ability to perform the weaving procedures and the techniques. The study found that these weaving procedures and techniques include winding the yarns onto the bobbins; warping; heddling and reeding; weaving; setting patterns; tying up yarns. The competent weaver is supposed to demonstrate Kente knowledge in terms of the ‘know-how’ in the winding of yarns onto the bobbin; warping; heddling and reeding, patterns setting, tying up and weaving. These techniques are the sanctioned procedures and techniques a competent weaver performs to produce Kente fabric from start to finish. In addition, some participants mentioned that the competent weaver is also expected to be capable of performing the single, double and triple weave techniques. Hence, the inability to perform all these sanctioned procedures and procedures amount to incompetence on the part of the weaver.

The production of defect-free Kente fabric demonstrates knowledge of the Kente-weaving procedures and techniques. This appears to support Gherardi’s (2001:136; 2003:352; 2008:517-518; 2009a:118) notion that the socio-cultural phenomenon of practical accomplishment conveys

the notion of materiality and handiwork of a craftsman's skills in practice. The ability to produce Kente fabrics without defects implies competence. Hence, even if the person is able to demonstrate 'know-how' in terms of the procedures and techniques of Kente weaving, the final product of the woven Kente fabric should be defect-free before he can be regarded as a competent weaver. Here, the focus is not on the procedures and techniques involved in Kente weaving, but on the output, the woven fabric. The finding shows that a Kente fabric full of defects such as frayed selvage and broken ends shows incompetence. This finding appears to support Ludlow's (2020:10) point that mastery of a craft is proven through accomplished practice. The accomplished practice is seen in the ability to produce defect-free fabric. The findings show that the competent weaver should be able to fix the challenges such as warp and heddle breaks that result in some of the defects in Kente fabric.

In addition to the production of defect-free Kente, the speed of weaving in the loom constitutes competence in the Kente-weaving landscape. The findings show that compared to the master weavers, novice and junior weavers are relatively slow in weaving, as they take a long time to weave one strip of Kente fabric of 64 inches a day. This is interpreted by the findings as constituting incompetence. The ability to weave six or more strips a day constitutes competence. It is for this reason that some novice weavers such as Yaw Oppong and Sika Afranie aspire to weave six or more strips of Kente fabric a day. Fast weavers are considered competent whereas slow weavers are considered incompetent. The Kente fabric resulting from fast weaving should be defect free.

The Kente-weaving landscape is made of various Kente fabrics with different names and different patterns. Every Kente fabric or pattern has its identity. Hence, demonstrating the 'know-how' to identify the various Kente and the embedded patterns constitutes competence. In other words, demonstrating identification knowledge by identifying the various Kente fabrics and patterns in the Kente-weaving landscape establishes the weaver as competent. The competent weaver is supposed to be able to know the names and embedded patterns of fabrics. The findings of this study show that the master weavers have the 'know-how' to identify the various Kente fabrics and their embedded patterns. The master weavers can mention the names

of the Kente fabrics and the embedded patterns shown to them without any difficulty as compared to the novice and junior weavers.

Like with every cultural artefact, the finding of this study, show that Kente fabric is associated with some historical background and narratives. The knowledge of the history and background narratives partly constitutes competence in the Kente-weaving landscape. This finding is in line with Bolisani and Bratianu (2018:8), and Dombrowski, Rotenberg and Bick's (2013:38-44) integrated approach to knowledge, which partly comprises knowledge claims. According to Dombrowski, Rotenberg and Bick (2013:38-44), knowledge claims are what we know or claim to know through explicit expression. In support of the findings, knowledge of the history and background is a form of knowledge claim that is explicitly expressed in the Kente-weaving landscape. Hence, the demonstration of the knowledge claims constitutes competence in the Kente-weaving landscape. From this finding, it is important to note that competence in the Kente-weaving landscape is not constituted only in practical knowledge, but also knowledge claims. The historical background knowledge constitutes both 'know-that' knowledge and 'know-why' knowledge, as noted by Yliveronen and Seitamaa-Hakkarainen (2016:2). For the 'know-that' knowledge, the historical background narratives focus on the facts of the weaving landscape. These facts include knowledge of how Kente weaving started, who the first weavers were and the historical trends of Kente weaving.

As shown in Chapter 7, the invention of Kente weaving in the Bonwire Community is attributed to Opoku Kuragu and Kwakye Ameyaw. The story is told that they invented Kente weaving after observing spiders weaving webs. The 'know-that' knowledge in terms of the history and background of the Kente-weaving landscape is considered basic knowledge every weaver must have. For the 'know-why' knowledge, the background knowledge of some specific Kente fabrics gives reasons for their names. An example of such Kente fabric is *Torku kra ntoma*. The finding shows that Torku, the name of the weaver who first wove that Kente fabric with the embedded patterns died the very day he finished weaving that Kente fabric. The story is told that he was forewarned he would die immediately after he finished weaving that Kente fabric, hence its name on the fabric. The story gives the reason for the name of the Kente fabric and therefore the 'know-why' of the name *Torku kra ntoma*.

Another ‘know-how’ concerning Kente knowledge that is found to constitute competence in the Kente-weaving landscape is the demonstration of quality determination knowledge. This finding is consistent with Gherardi’s (2008:521) observation that in craft, the exhibition of aesthetic knowledge relates to competence. The quality determination knowledge is an aesthetic knowledge the competent weaver would have to demonstrate. The ‘know-how’ to determine whether a piece of Kente fabric is well woven or not, is crucial to the consideration of competence. Competence is seen in the demonstration of the skills to pass judgment on the quality of a woven fabric. The competent weaver is expected to have the ‘know-how’ to determine which Kente fabric is of high quality and which is of low quality in the Kente-weaving landscape.

In addition, competence is constituted by the knowledge of the yarns and the colours. By knowledge of the yarns, the findings show that the competent weaver is expected to be well informed regarding the two most used yarns in the Kente-weaving landscape, namely cotton and rayon. Both cotton and rayon yarns have their features and use. Hence, by knowledge of the yarns, the competent weaver is expected to demonstrate knowledge of the features and uses. Many of the participants mentioned that cotton yarns are harder when compared to rayon yarns. The cotton yarns are used as the warp, whereas the rayon yarns are used as the weft. The yarns are in colours hence, knowledge of how and when to use the colours, and for which fabric or pattern, constitute competence. It is also evident from the study that there are traditionally acceptable colours used for making some Kente fabrics or patterns. For instance, *Fatia fata Nkrumah* is woven from yarns with black and blue colours. The *Sika futuro* fabric is traditionally expected to be woven from gold yarns. The *Torku kra ntoma* is woven from white, red, blue and green yarns. The study shows that when these fabrics are mentioned, the competent weaver is expected to know the colours of the yarns from which the Kente fabric is woven.

The second element of competence is mentorship capability. This study found that the ability to mentor novice weavers constitutes competence. The study shows that the ability to teach or impart Kente knowledge to less experienced weavers such as novice and junior weavers is an expected capability of a competent weaver. The findings show that every competent weaver should be able to mentor others. The ability to mentor is judged by whether the weaver has in the

past, or is currently mentoring any novice weaver. In other words, mentorship capability is judged by apprenticeship; whether the competent weaver is mentoring or has mentored apprentices.

8.3 HOW BECOMING A COMPETENT WEAVER IS ENABLED BY INFORMATION LITERACY

The findings of this study show that a novice weaver becoming a competent weaver is enabled and underpinned by information literacy. In line with the socio-cultural perspective to information literacy, the findings show that in becoming a competent weaver, the novice weaver seeks, accesses and uses the valued information to develop the practical skills that are required to perform the practices that make a weaver competent in the Kente-weaving landscape. This finding is consistent with the perceived position of Hicks (2018a:26), Lloyd and Wilkinson (2016:337), Lundh and Limberg (2008:93), Pilerot (2016:418), Sundin (2008:27) and Talja, Tuominen and Savolainen (2005:86) that becoming information literate from the socio-cultural perspective means satisfying the information needs concerning the practices of a specific setting.

The findings show that access to the Kente information makes the novice weaver information literate and therefore competent in the Kente-weaving landscape. According to the findings, Kente information consists of two types, off-the-loom and on-the-loom information. Access to both the off-the-loom and on-the-loom information enables the novice weaver to transition to become a competent weaver. Whereas the off-the-loom information is accessed through the engagement in the off-the-loom practices (activities), the on-the-loom information is accessed through the engagement in the on-the-loom practices (activities). The study shows that the off-the-loom and on-the-loom practices are either peripheral or full-participating activities. The on-the-loom information consists of stretch and tie-up information, patterns-setting information, weaving techniques information and challenges and defects fixing techniques. The off-the-loom information consists of weft preparation information, warp preparation information, heddling and reeding information and history and background information. The findings show that both the

on-the-loom and off-the-loom information are accessed gradually through information sharing by means of influence or information work.

From the discussion above, the conceptual framework depicting the information literacy practice of weavers by which a novice transitions to become a competent weaver is illustrated graphically in Figure 8.1 below:

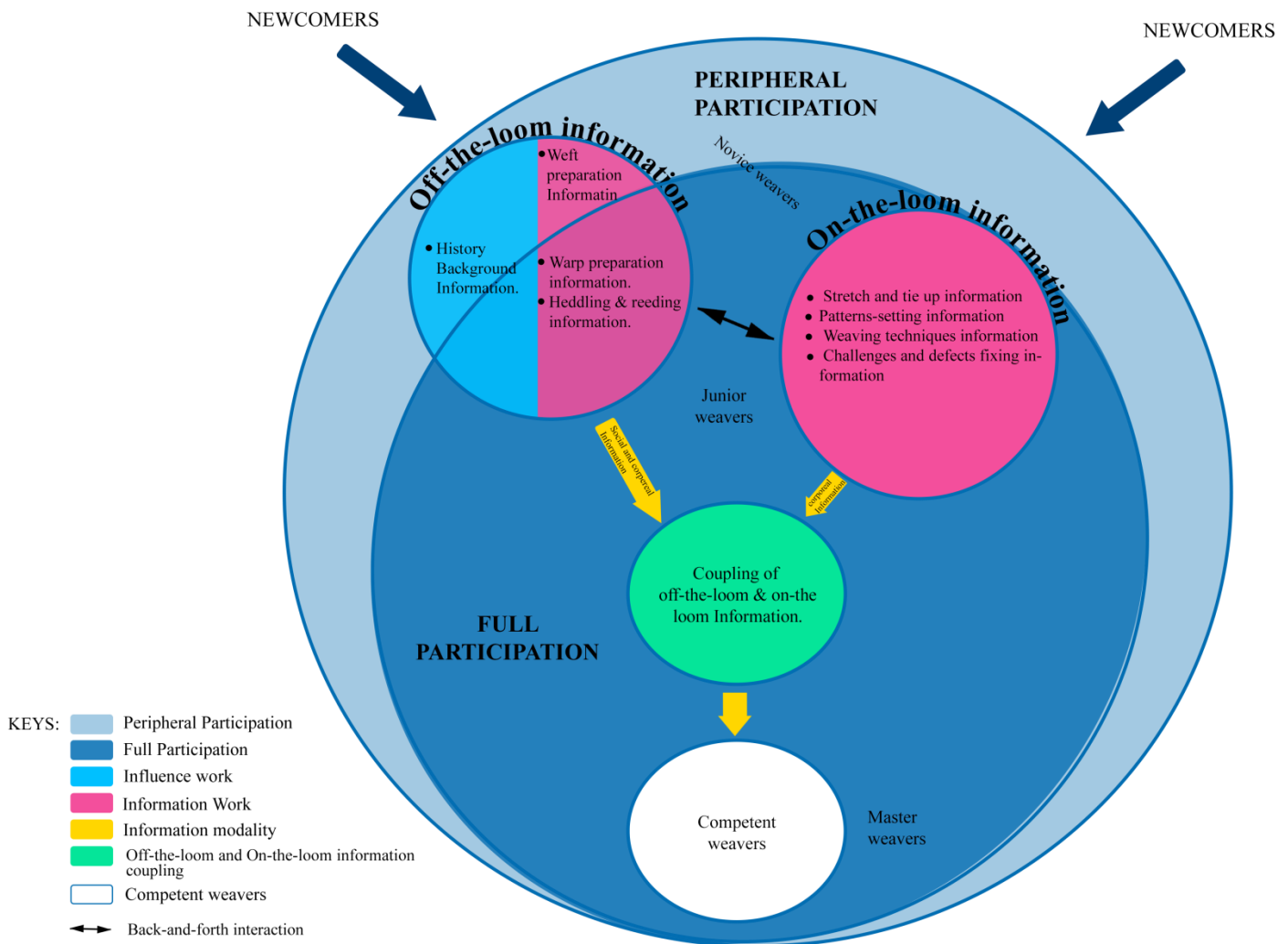


Figure 8.1: Model illustrating information literacy practice of weavers

Source: Researcher

The initial proposed conceptual framework (i.e. Figure 4.4) was used to guide the study. The empirical findings necessitate a revision to reflect the variables in the Kente-weaving landscape. The framework for information literacy practice of weavers (i.e. Figure 8.1) reflects and explains how a novice weaver becoming a competent weaver is enabled by information literacy in the weaving landscape.

As the novice (newcomer) enters the Kente-weaving landscape, he accesses the history and background information. Access to the history and background information enables competence in the Kente-weaving landscape. As per the findings, novice weavers who hail from the Bonwire community access the history and background information of Kente either from the family or the community through socialisation. This finding is consistent with Boateng's (2018) findings. Boateng (2018) found that the family is the first source of Kente information for the weaver. Also, the study found that some novice weavers are deliberately taught the history of Kente. The findings show that the history and background information that is shared with the novice weavers encapsulates the inventors of Kente, patterns as well as historical trends. The sharing of the history and background information of the Kente fabric to the novice weaver is a perfect example of influence work in the Kente-weaving landscape. Following Lloyd (2010b:173) and Leith and Yerbury (2015:15), the sharing and access to Kente history and background information impart the novice weavers' opinions to have shared knowledge of the Kente-weaving practices. Access to the Kente history and background enables the cultural beliefs and values in the Kente-weaving landscape to foster. Inferring from Lloyd (2009:413; 2011:290), access to the history and background information enables the novice weaver to be equipped with the 'know-that' knowledge to facilitate understanding of the socio-cultural elements in the Kente-weaving landscape. For example, the findings show that there are meanings behind some of Kente fabrics and patterns such as the *Torku kra ntoma*.

The findings show that the novice weaver accesses information on weft preparation before he transitions to becoming a competent weaver. Alluding to Lave and Wenger (1991), the findings show that weft preparation is a peripheral activity. This is because many of the participants mentioned that the weft preparation is the easiest and the first thing every novice weaver learns

before moving gradually to the most difficult activities. Many of the participants who are master weavers mentioned that they show their apprentices how to prepare the weft. This was also attested to by participants who are novice weavers, that they accessed weft preparation information in the Kente-weaving information. The findings show that, in the preparation of the weft, yarns are wound onto the bobbin using the bobbin winder. The wound yarns on the bobbin are then inserted into the shuttle. Many of the participants suggest that before the novice weaver becomes competent or advances the 'know-how' knowledge of how the yarns are wound onto the bobbin using the bobbin winder, he accesses the information on the winding of the yarns onto the bobbin through the lived action of other weavers. The weft preparation practice is an information work in the sense that as the novice weaver observes master weavers and other competent weavers perform the weft preparation practice (technique) in the Kente-weaving landscape, they access information on how the weft is prepared to develop the 'know-how' knowledge. Hence, developing the 'know-how' knowledge of weft preparation does not happen in a vacuum. Relating Bates' (2009:2381) understanding of information to the lived action of the weft preparation, the study shows that novice weavers deduce a new understanding and thoughts from the performance of the weft preparation practice. This adds to the novice weavers' knowledge and thereby gradually makes them competent. Many of the participants suggest that the novice weaver develops an understanding and insight into the weft preparation practice through the lived actions of other weavers. Aside from the information accessible through the lived actions of weft preparation, novice weavers also receive explicit information in the form of weft preparation 'dos' and 'dons' from master weavers to develop competence or 'know-how' knowledge of the weft preparation practice.

The warp preparation is considered a full-participating activity the novice weaver must learn to develop competence or the 'know-how' knowledge of the Kente-weaving craft. This finding is consistent with Adom's (2016), and Amissah and Afram's (2018:98) findings, in that they both found the preparation of warp as a crucial practice that a weaver performs as part of weaving Kente fabric. It therefore makes sense for this study to find that to develop the 'know-how' knowledge of warp preparation, the novice weaver has to access the warp preparation information. The findings show that the novice weaver accesses the warp preparation information from the lived action of warp preparation practice either from a master weaver or

any other advanced weaver at the Kente weaving landscape. Referring to Lloyd (2010a:254), the study shows that warp preparation is information work that affords corporeal and embodied understanding and meaning to the novice weaver to develop the ‘know-how’ knowledge. Through the lived action of warp preparation by other weavers, information on how the warp is prepared is shared intentionally or unintentionally with the novice weavers in the Kente-weaving landscape. The warp preparation involves the performance of techniques such as *Nyansapɔ* knot and the *Kina hyɛ*. To develop the ‘know-how’ knowledge of the warp preparation, the novice weaver has to learn how these techniques are done. Consequent to this, the findings show that as part of the learning trajectories of some of the novice weavers, the master weavers make the novice weavers assist and observe them perform the warp preparation to get the insight and understanding of how it is done. The insight and understanding gained from assisting and observing the master weavers connote socially and materially mediated information accessed to understand the warp preparation practice. Relating this to Buckland’s (1991:351) ‘information-as-knowledge’, the insight and understanding gained from assisting and observing assists novice weavers in learning how the warp is prepared. Hence, the assistance and access to the lived action of the warp preparation practice become an activity that informs to change the knowledge state and therefore the ‘know-how’ knowledge of the novice weaver. It is shown from the findings that access to the warp preparation information is not only through observing the lived action of warp preparation but also through comments and correctional feedback master weavers share with the novice weavers. The information accessed from the lived action and master weavers’ comments and feedback enables the novice weaver to develop the ‘know-how’ knowledge of the warp preparation practice.

Another full-participating and information work in the Kente-weaving landscape is the heddling and reeding practices. The heddling and reeding practices are procedures and techniques a weaver performs as part of the Kente production. Hence, this study finds that the development of the ‘know-how’ knowledge of the heddling and reeding techniques is underpinned by access to the heddling and reeding information consistent with the findings of Sabutey (2009:108), and Amissah and Afram (2018:99). They acknowledge that the procedure and techniques that follow the warp preparation are the heddling and reeding practices, respectively. To learn and develop the ‘know-how’ knowledge of how the heddling and reeding practices are done, the findings

show that the novice weavers are shown the performances of the heddling and reeding techniques in the Kente-weaving landscape. By observing the performances of the heddling and reeding techniques, novice weavers gain information in terms of insight and understanding of the heddling and reeding practices. The finding shows that showing the novice weavers how yarns are passed through the heddles and the reed using a broomstick informs the novice weavers to develop the corporeal and embodied understanding of the heddling and reeding practices. By the lived action of heddling and reeding techniques, the novice weaver grasps the tricks involved in the heddling and reeding practices. For example, how the pairs of warp ends are passed through the ‘eyes’ of the heddles. Also, how the broomstick is used to pass a set of two pairs of warp yarns through the dent of the reed. Observing the tricks of the heddling and reeding techniques connotes access to the heddling and reeding information that makes a difference in terms of developing the ‘know-how’ knowledge of the heddling and reeding practices.

The findings show that the on-the-loom practice of stretch and tie-up are both full-participating and information work. The novice weaver also accesses information on the lived action of the stretch and tie-up practices (techniques) to develop the ‘know-how’ knowledge of how it is done. Stretch and tie-up practices are the techniques used to set up the warp in the loom. The findings show that it involves making two types of knots, namely *Agonoye* and *Nyansapɔ*. As key techniques in the production of Kente, the findings show that novice weavers are shown how the warp is stretched and tied in the making of the *Agonoye* and *Nyansapɔ* knots in the loom by the master weavers. As the master weaver stretches and ties the *Agonoye* and *Nyansapɔ* knots, the novice weaver accesses the *Agonoye* and *Nyansapɔ* knots information to develop a corporeal understanding of how the stretch and tie-up techniques are done. In other words, the lived action of the stretch and tie-up techniques enables the novice weaver to develop insight and thereby makes him information literate as far as the stretch and tie-up practices are concerned. The findings show that to develop the ‘know-how’ knowledge of the stretch and tie-up techniques information, the novice weavers access the information on how the *Agonoye* and *Nyansapɔ* knots are made.

Another on-the-loom practice (technique) that the novice weaver accesses information on to develop competence in the Kente-weaving landscape is the patterns setting. The patterns setting

is considered both full-participating activity and information work since is relatively challenging to perform. The novice weaver learns to do patterns setting on the warp through the lived actions of other weavers in the Kente-weaving landscape. In the setting of the patterns on the warp, the novice weaver accesses information on the ‘key selection’ techniques. Aside from the fact that it was observed, some of the participants mentioned that the master and junior weavers in the Kente-weaving landscape afford information on the ‘key selection’ by completing the task in the presence of the novice weaver, who then develops the ‘know-how’ knowledge of the patterns-setting practice. In other words, the novice weaver observes the movement of the master weaver’s hands and feet as he raises and lowers the warp to do a ‘key’ selection technique to develop the ‘know-how’ knowledge. With those patterns that do not involve the ‘key’ selection technique, for example, *Akyem*; the novice weaver observes how warps are raised and lowered in the loom to develop the ‘know-how’ knowledge to set the *Akyem* pattern.

The development of the ‘know-how’ knowledge in the actual weaving is established by the practical access to the weaving techniques information in the Kente-weaving landscape. As a full-participating activity and information work, through the lived action of weaving, the novice weaver accesses information on how the shed is created and how the picking technique is done when weaving a fabric. Also, the novice weaver accesses information on the single, double and triple weaving techniques, by observing master weavers and other competent weavers.

The findings show that there are challenges and defects associated with weaving a fabric. Among other things, these challenges and defects include warp and heddles breaks, broken ends and frayed selvage. To address these challenges and defects, the findings show that the novice weaver is shown the techniques for fixing these weaving challenges and defects by observing the practical fixing methods of more advanced weavers in the Kente-weaving landscape.

For emphasis, as shown in Figure 8.1, the engagements in the peripheral and full-participating activities of the Kente-weaving landscape enable novice weavers to access the on-the-loom and off-the-loom information through influence and information work. The on-the-loom and off-the-loom information are then coupled to enable the novice weavers to develop the ‘know-why’, ‘know-that’ and ‘know-how’ knowledge to make them competent and information literate in the Kente-

weaving landscape. The coupling of the on-the-loom and off-the-loom Kente information entails the reflective and reflexive activities that are demonstrated in the ability to competently engage in both the on-the-loom and off-the-loom practices to weave Kente fabric from start to finish without defects.

8.4 WORKPLACE INTERACTION AND PARTICIPATION AND HOW THIS DEEPENS NOVICE WEAVERS' INFORMATION LITERACY

The findings show that interaction and participation in the workplace give the novice weavers hands-on experience and access to the art of Kente weaving, which helps develop and deepen their 'know-how', 'know-that; and 'know why' knowledge in the Kente-weaving landscape. The findings show that interaction and participation in the Kente-weaving landscape provide the avenue for novice weavers to receive apprentice positions and as a result receive the necessary guidance and monitoring that will result in novices eventually becoming master weavers. The findings show that by being an apprentice, the novice weaver not only receives information from the master but also from other competent weavers, including junior weavers. Where the novice weaver struggles or makes a mistake in weaving, a master weaver or any other competent weaver closer can correct him by giving him the necessary information to improve his skills in the practice of Kente weaving. Novice weavers receive guidance when confronted with weaving challenges such as warp and heddles' breaks as well as tying-up technique difficulty. Such information enables novice weavers to develop the 'know-how' regarding the fixing of warp and heddle breaks when confronted with them in the future.

By interacting and participating in the Kente-weaving landscape, the findings show that the novice weaver is afforded information through observation and learning by doing. The Kente-weaving landscape provides novice weavers with the opportunity to observe the activities and therefore to learn practical skills. Through observation, the novice weaver accesses information to deepen the know-how of Kente-weaving procedures and techniques as well as challenges and defects fixing. This finding is in line with Wellton, Jonsson and Svingstedt (2019:413) who find the proper way of cutting vegetables is provided by master chefs through observation by novice

chefs. Similar to the finding of Wellton, Jonsson and Svingstedt (2019:413), the proper way to learn and develop skills that pertain to the Kente-weaving practices (procedures and techniques) is by accessing information while observing master weavers and other competent weavers in the Kente-weaving landscape. In the same manner, studies by Agyemang and Boateng (2019:117) and Tracey *et al.* (2005:7), show that the development of the ‘know-how’ in an information landscape is reinforced by observing the work practices of the masters provided to the novice weaver.

By interacting and participating in the Kente-weaving landscape, novice weavers’ information literacy in the Kente-weaving landscape is enhanced by performing the practices (procedures and techniques) of Kente-weaving. The master weavers enable the novice weavers to perform techniques like the wrapping of yarns on the bobbins, warp preparation, hedding and reeding to hone their skills when doing Kente weaving. Like novice potters as found by Lepistö and Lindfors (2015:3), Patchet (2017:33), Klekot (2020:220) and Ludlow (2020:10), by *doing*, the novice weavers learn by having access to information, which in turn enhances their practical knowledge and therefore the information literacy of the Kente-weaving landscape. Like with other crafts, by observing and imitating actions, the novice weaver learns the skills of applying each technique (Gibb 2005; Lepistö & Lindfors 2015:3; Kokko & Räisänen 2019:29,39; Ludlow 2020:12). Also, by *doing*, the novice weaver provides the master weaver with information on his weaving challenges to enable the master weaver to assist. This finding is consistent with Lloyd and Somerville (2006) and Lloyd (2010d) who found that experts identify *knowing* gaps in the novices’ practices when novices-in-training are required to perform basic firefighting tasks. The findings show that master weavers always stand beside novice weavers to observe them as they practically apply what they have been observing. The master weaver is therefore on hand to notice any mistake, inform the novice weaver and assist him in learning the correct method.

Interaction and participation in the Kente-weaving landscape provide novice weavers with information through workplace conversation, which augments their ‘know how’ and ‘know that’ knowledge of Kente weaving. The findings show that novice weavers hear tips for weaving Kente beautifully from the conversations of other weavers. Also, in the conversations among weavers or weavers’ conversations with clients and tourists, the names of the tools, Kente fabrics

and patterns are referred to, and also assisting the novice in learning the names of the tools, Kente fabrics and patterns. This confirms Billett's (2010:48-49) findings that conversation around artefacts affords *knowing* opportunities. The study shows that the information accessed through workplace conversation furnishes novice weavers with insight into the activities of the Kente-weaving landscape. Consistent with the studies of Moring (2011), St. Jean, Jindal and Chan (2018), Campbell (2019) and Jin *et al.* (2019:1), the findings show that conversation at the workplace enables novices to be informed, knowledgeable, and therefore able to perform work practices competently. Per the findings, the conversations in the Kente-weaving landscape also provide an opportunity for novice weavers to ask questions concerning Kente weaving for clarification. This finding is in line with other studies like Lepistö and Lindfors (2015:3), St. Jean, Jindal and Chan (2018:290), and Agyemang and Boateng (2019:117), where novices ask questions to garner information and gain experience to change their status from novices to competent practitioners.

8.5 THE CONNECTION BETWEEN MATERIAL OBJECTS AND INFORMATION LITERACY

As far as becoming an information literate person, and resultantly, a competent weaver in the Kente-weaving landscape, the novice weaver must develop the 'know-how' relating to material objects of the Kente-weaving landscape. Just as Shove, Pantzar and Watson (2012) and Lloyd (2017:93) note that to become information literate in a specific work landscape, the person must develop competence with the material activities of the social practice; the findings show that to become information literate, the person, regarding the material objects, must learn to use the tools. In other words, the information literate person in the Kente-weaving landscape knows how to use the tools in Kente weaving. By applying practical knowledge of the tools use, the information literate or competent weaver is corporeally informed of how the shuttle, treadle, swordstick, bobbin, bobbin winder, reed, heddles and other tools of the landscape are used. Here, becoming competent or information literate in the Kente-weaving landscape is synonymous with having practical knowledge regarding the use of the tools.

According to the findings, there are sanctioned ways these tools are used in the weaving of Kente. The sanctioned ways are the proper and acceptable ways the tools are used in the Kente-weaving landscape. The competent weaver or information literate person of Kente-weaving landscape has to learn these sanctioned ways. The issues of the sanctioned ways the tools are used at the Kente-weaving corroborate the findings of Huvila (2018:229) who says that when tools are put to work in the workplace, procedures, norms and practices are also put to work in terms of the use of the tools. Hence, the information literate person in the Kente-weaving landscape is aware and practically capable of using the tools in line with protocols and norms associated with the tools in the Kente-weaving landscape. This finding is relatable to Olsson (2016a:413-415) who suggests that there is a proper way to handle the trowel to lift fragile artefacts at the archaeological landscape. In the same manner, there is a proper way to handle the shuttle in the Kente-weaving landscape. The shuttle is handled with the thumb placed on the shuttle bar while the index finger is placed on the tip of the shuttle, with the remaining fingers placed under the shuttle bar. The fingers must not touch the loaded bobbin in the shuttle. For the treadles, the threads that hold the treadles are placed in-between the big toes and next toes for both the right and left feet so that the treadles do not slip when they are being pressed down. In addition, the swordstick is used by twisting the wrist backward to open up the warp. The findings show that the information literate person of the Kente-weaving landscape is expected to be informed and *know* how the shuttle and treadles are used in weaving. The picking technique is performed by pressing down the right and left treadles alternatively to create a shed while simultaneously throwing the shuttle from the right to left and vice versa. The uses of the tools suggest the movement of parts of the body. The movement of the hands, wrists and feet suggests the development of motor skills in relation to information literacy. An information literate person has to develop motor skills to *know* how to throw the shuttle through the shed, how to press down the treadles as well as how to use the swordstick.

8.6 HOW THE BODY ENABLES INFORMATION LITERACY

The body facilitates information literacy through understanding the cues of the Kente-weaving landscape. The human senses come to the fore in the understanding of the cues of the landscape. When participating and interacting in the Kente-weaving landscape, cues that are understood

through the body are afforded the weavers in the Kente-weaving landscape. This finding emphasises Gherardi's (2008:521) point that in the interactions and participation in the practices of the workplace, novices should be able to train their bodies (develop competencies) to have the 'eye', 'nose', 'ear', 'skin' and 'tongue' interpret 'something'. Understanding Gherardi's (2008:521) point means that the senses should be trained to be able to professionally understand and interpret the afforded information of the craft, drawing attention to physical cues afforded in the Kente-weaving landscape. Per the findings of this study, when the weaver interacts and participates with others in the Kente-weaving landscape, the eyes of the weaver are trained to read and understand the cues concerning the quality of a woven fabric. The cues are read and understood according to what the weaver sees on the woven fabric. Seeing features like bits of fluff and frayed selvage are understood and interpreted as low-quality or poorly woven fabric. Other features of low-quality fabric that facilitate understanding through the eyes are the appearance of broken ends and float on the surface of the fabric. Seeing broken ends and floats on a woven fabric are indications that the warp and heddles got broken when the fabric was being woven. The visual cues of bits of fluff, frayed selvage, broken ends and float afford information that is interpreted with regard to the quality of Kente fabric in the Kente-weaving landscape. Relating the body to the information literacy of the Kente-weaving landscape, the eyes are trained to identify and understand the features of bits of fluff, frayed selvage, broken ends and float.

In addition, the findings show that cues emanating from the smoothness or roughness of fabric are accessed and understood through the skin. Tactile perception from the touch of the fabric is a cue that gives information on the quality or otherwise of the woven fabric. The cues emanating from the weight of the fabric make this finding relatable to Olsson's (2016a:414) findings that the heaviness, lightness or smoothness of an artefact as experienced by the body connotes meaning. A smooth feel to the touch signals quality whereas a rough feel to the touch signals low quality. Just as Vannini and Vannini (2019:8) observed the use of the fingers in the woodwork to ascertain the unique qualities of wood's texture through combing, the weight of the Kente fabric is ascertained by holding with the fingers. The weight that is felt from holding a fabric is a cue for assessing the quality or otherwise of the fabric. A heavier feeling signals well beaten-up fabric, which is of high quality, whereas a lighter feeling signals a poorly beaten-up fabric of low

quality. It was found that the bendability of the fabric gives information on its quality. Whereas, easily bendable fabric signals low-quality fabric, difficult bendable fabric signals high quality. Understanding aesthetic knowledge is knowledge experienced through the taste, look, smell, feel or sound of things in the workplace (Ewenstein & White 2007:689); the findings show that aesthetic knowledge of the Kente-weaving landscape is ascertained through the body.

The findings show that yarn can be identified by its hardness or softness. The cue of its softness or hardness is ascertained by an attempt to tear the yarn into two. This finding is relatable to Illum (2006:119), Lepistö and Lindfors (2015:4), and Nasserri and Wilson (2017:194) who suggest that in craft, the cues suggest a ‘dialogue’ between the body and material objects. The ‘dialogue’ is understood as the feedback received in the attempt to tear up a yarn. The amount of effort exerted to tear the yarn signals the type of yarn. The findings show that cotton yarn is harder in comparison to rayon and therefore much effort is exerted to tear it up. Hence the effort applied in tearing up a yarn affords cues of hardness or softness, which relate to cotton and rayon, respectively.

The patterns are cues for identifying Kente fabric. Each pattern has its distinct layout and design. The design and shape of the *Babadua* pattern are different from the *Aprému* pattern, so the *Rotoa* pattern is different from the *Nkyimkyim* pattern. The findings show that the types of patterns found in a piece of Kente fabric provide a cue that signals the name of Kente fabric. The information literate person of the Kente-weaving landscape must have an ‘eye’ for identifying patterns to be able to identify the types of Kente fabric.

8.7 SUMMARY OF THE CHAPTER

This chapter discusses the findings alongside the literature review. The elements of competence in terms of Kente knowledge and mentorship capability were discussed. After this, the requirements for a novice weaver to transition and become a competent weaver and how this transitioning is enabled by information literacy were also discussed. The chapter discusses that becoming a competent weaver is enabled by access to information in relation to the practices (procedures and techniques) of the Kente-weaving landscape. Access to the information in the

practices of the Kente-weaving landscape enables the novice weaver to develop the practical and theoretical knowledge of the Kente-weaving craft. The relationship between material objects and information literacy is also discussed. Finally, how the body facilitates *knowing* the Kente-weaving landscape was discussed.

The final chapter provides an overview of the findings as discussed in Chapters 7 and 8, providing some summary, limitations and direction for future studies, personal reflection, conclusion and recommendations.

CHAPTER 9: SUMMARY, PERSONAL REFLECTION, CONCLUSION AND RECOMMENDATIONS

9.1 INTRODUCTION

This concluding chapter provides a summary of the research findings by revisiting the research questions and the objectives of the study. The experiences and lessons learnt in the field are presented by way of personal reflection. The conclusion focuses on how this study advances the body of knowledge regarding information literacy are presented. It must be understood that as with every study, this study has some limitations. These limitations and implications are all highlighted with some suggestions for future studies provided. The recommendations from the study close the chapter.

9.2 SUMMARY OF THE RESEARCH FINDINGS

The purpose of the study is to explore how becoming competent weavers is enabled by information literacy practice in the Kente-weaving landscape. The rationale is to emphasise how learning in the Kente-weaving landscape is undertaken and how practitioners in the Kente-weaving landscape come to know what they know and therefore become information literate in the weaving landscape. The summary of the findings alongside the research questions of this study is given in 9.2.1 to 9.2.5.

9.2.1 Research question 1: What constitutes competence in the Kente-weaving landscape?

The objective of research question 1 has been to identify the elements of competence in the Kente-weaving landscape. It sought to establish the requirements and skills that make a person competent in the Kente-weaving landscape. The study found that in the Kente-weaving landscape, competence constitutes the composite of the demonstrations of Kente knowledge and mentorship capability.

The demonstrations of Kente knowledge and mentorship capability are the norms and conditions for measuring competence in the Kente-weaving landscape. By the demonstration of Kente knowledge, the competent weaver is supposed to demonstrate the following:

- Weaving-related knowledge
- Identification knowledge
- History and background knowledge
- Quality determination knowledge
- Yarns and colour combination knowledge.

With weaving-related knowledge, the competent weaver should be able to perform integrative practices (procedures and techniques) to produce Kente fabric from start to finish at least at a rate of six strips a day and without any defects. These integrative practices are winding the yarns onto the bobbins, warping, heddling, reeding, weaving, setting patterns and tying up yarns. Identification knowledge consists of the ‘know-how’ to identify Kente fabrics and their embedded patterns with ease. History and background knowledge encompass knowledge of the narratives on the origin and historical trends of the Kente fabric. Quality determination knowledge constitutes the ‘know-how’ to determine the quality of a woven Kente fabric. Yarns and colours combination knowledge encompass knowledge of the proper uses of the yarns and the colours in the Kente-weaving landscape.

For the mentorship capability, the competent weaver should be capable of teaching others how to weave Kente fabric. The findings show that the mentorship capability is seen as evidence of having trained less-experienced weavers in the past or currently doing so.

9.2.2 Research question 2: How do novices becoming competent weavers enabled by information literacy in the Kente-weaving landscape?

Research question 2 has sought to explore how information literacy unfolds in allowing novice weavers to be competent in the Kente-weaving landscape. The focus was on how novice weavers

knowing the Kente-weaving landscape is enabled by information literacy. The study found that no matter the learning trajectories, becoming a competent weaver is enabled and underpinned by information literacy through access to Kente information. Kente information is accessed through the engagements in the peripheral and full-participating activities of the Kente-weaving landscape. The Kente information consists of off-the-loom and on-the-loom information.

The off-the-loom information constitutes weft preparation information, warp preparation information, heddlng and reeding information and history and background information. Off-the-loom information is accessed by the novice weavers to develop the ‘know-how’ to become information literate to perform the off-the-loom practices of weft preparation, warp preparation, heddlng and reeding competently in the Kente-weaving landscape. The ‘know-that’ knowledge of the history and background is accessed socially through information sharing in the Kente-weaving landscape.

The on-the-loom information constitutes the stretch and tie-up techniques information, patterns-setting information, weaving techniques information and challenges and defects fixing techniques information. Like off-the-loom information, on-the-loom information is also accessed by novice weavers to develop insight and understanding to become information literate.

The findings show that both the on-the-loom and off-the-loom information are situated in the performance of the on-the-loom and off-the-loom practices of the Kente-weaving landscape. As a way of *knowing* the Kente-weaving landscape, the novice weaver has to access the situated information in the on-the-loom and off-the-loom practices to develop competence in the Kente-weaving landscape. Performance of the on-the-loom and off-the-loom practices take place in the form of information work where corporeal information is shared and accessed through the lived actions of the master and junior weavers. Influence work that shapes and ensures a shared understanding of the on-the-loom and off-the-loom practices takes the form of the history and background of Kente. Hence, both the on-the-loom and off-the-loom information are accessed through the information and influence work and are coupled and internalised to transition the novice weaver into a competent weaver.

9.2.3 Research question 3: How does workplace interaction and participation deepen or enact novices' information literacy of the Kente-weaving landscape?

For research question 3, the objective has been on how interaction and participation in the Kente-weaving practices deepen novices' information literacy of the Kente-weaving landscape. The findings show that interaction and participation in the Kente-weaving practices provide novice weavers avenues to access the information affordance of the Kente-weaving landscape to deepen their information literacy of the Kente-weaving landscape. The findings show that the Kente-weaving landscape, as a workplace, provides novice weavers with the following information affordance to entrench their information literacy of the Kente-weaving practices:

- Mentoring and guidance support
- Observation and learning by doing
- Workplace conversations.

The findings show that novice weavers in the Kente-weaving landscape are provided the opportunity to improve their 'know-how' knowledge through mentoring and guidance support from master and junior weavers to perform the Kente-weaving practices. Also, novice weavers have the opportunity to access information to learn by observing master and junior weavers in the Kente-weaving landscape. The availability of tools enables the novice weaver to practice and develop their insight into what has been observed. By interacting and participating, novice weavers deepen their information literacy through the conversation the Kente-weaving landscape workplace affords them.

9.2.4 Research question 4: How does becoming information literate relate to material objects in the Kente-weaving landscape?

The objective of research question 4 was to find the connection between material objects and becoming information literate in the Kente-weaving landscape. The findings show that in becoming an information literate person in the Kente-weaving landscape, the novice weaver must develop the 'know-how' regarding the use of the tools properly and acceptably in the

Kente-weaving landscape. Examples of these tools are the loom, shuttle, treadles, reed, swordstick and bobbin winder. Hence, becoming information literate in the Kente-weaving landscape relates to accessing the information required to develop the ‘know-how’ of the tools used. In other words, the demonstration of the ‘know-how’ of the tools used in the production of Kente fabric is evidence of *knowing* or being information literate in the Kente-weaving landscape.

9.2.5 Research question 5: How does the human body enable information literacy in the Kente-weaving landscape?

The objective of research question 5 has been to explore how the body facilitates knowing in the Kente-weaving landscape. The study found that the body facilitates or enables information literacy through understanding the cues in the Kente-weaving landscape. The human senses are trained to read, understand and interpret the cues of the Kente-weaving practices. The study shows that the cues are read and interpreted through the eyes and the skin. These senses are trained to read cues for weaving defects, quality, embedding patterns and the types of Kente fabric.

9.3 PERSONAL REFLECTION

As a novice ethnographer, the researcher experienced a personal learning curve and research growth. The research process and the apprentice role as a novice weaver exposed the researcher to many invaluable learning experiences. Notes compiled during the writing process, lead to personal reflection reflected in this section.

The research journey as “participant as observer” has improved the researcher’s information literacy of the Bonwire Kente Centre. It has provided him with many learning experiences at the Bonwire Kente Centre. Reflection on his practice as a novice weaver with the opportunity to access the practices of the Centre exposed him to the lived actions of other weavers. Though the lived actions afforded the researcher information to learn, the information experiences from observing were not the same as participating in the integrative practices of the centre. The cues

accessed from only observing would not have allowed growth, nor enabled the process of becoming a competent weaver. Observation provides shallow information and superficial knowledge of the integrative practices of the centre. The researcher experienced 'real learning' when he started to participate in the integrative practices of the centre and began to develop the 'know-how' of the integrative practices when he started to do it himself. It appeared simple when observing but difficult when participating in integrative practices. The researcher realised that the information experience of performing the integrative practices competently is hidden and can only be developed or accessed through participating in the integrative practices. For example, he thought he could perform the weft preparation practice just from observing others do it. When the researcher tried it, he kept making mistakes; shifting the bobbin winder and winding the yarns anyhow onto the bobbins in the early days of learning how to wind yarns onto bobbins. He had to be given advice (tips) by other weavers continually to develop the 'know-how' of weft preparation. The same thing applied when he first sat on the loom to weave; creating the shed to pick the shuttle to and fro was a challenge, the shuttle kept dropping from his hands, taking minutes for just one round of picking. In some instances, the researcher had to stand up for his master to do it over and over for him to develop his 'know-how'.

Information literacy is built on information experience encountered in the performance of the integrative practices of the centre. Participation in integrative practices makes novice weavers information literate of the centre. Participation in the integrative practices helped the researcher improve his practical knowledge of the integrative practices. The more he practised, the better he became at performing a particular practice. The more he picked in the loom the more he learnt the tricks to be faster in weaving.

The researcher understood why after many years some junior weavers had not learnt warp preparation and pattern-setting practices. He saw these two practices as more difficult to learn. They involved calculations and some confusing and difficult techniques, which have to be observed and practised repeatedly to develop the 'know-how' of how they are done. For the patterns, it depends on the kind of fabric to be woven.

The researcher realised that the identification of the embedded patterns of a Kente fabric is crucial to the identification of Kente fabric. Some of the patterns appear similar and therefore confusing to differentiate. Examples of such patterns are *Rotoa* and *Akyem*. These two patterns are characterised by broken vertical lines as the features for identification.

The research assisted the researcher in understanding what O'Reilly (2009:213) means by stating that spending enough time in the field provides an avenue for the ethnographer to witness first-hand the complex interlacing events as well as enable him to be present at the time of the day, week or month when culture is being unravelled. The practice of warp preparation does not happen every day in the Bonwire Kente Centre. This is because many weavers give it to other weavers outside the centre to do it for a fee. This makes it difficult for novice weavers to get the opportunity to observe and participate in the warp preparation practice. Spending time in the centre afforded the researcher the warp preparation information. It provided the opportunity to visit those weavers who do the warping of yarns outside the centre to learn. No description would have enabled the researcher to understand and develop his insight into the warp preparation had he not observed and participated in it. Although the researcher does not regard himself as a competent weaver yet, his knowledge of the Kente-weaving practices has significantly improved. The research process provided the researcher with both the tacit and explicit information experiences to grow to become information literate in the Kente-weaving landscape.

9.4 CONCLUSION

This study has explained how learning and information literacy in the informal context takes place. It has contributed to the understanding and advancement of workplace information literacy. Unlike other studies that focus on the formal and semi-formal workplace landscapes, this study focuses on the informal workplace landscape. It brings to the fore how information literacy enacts in the craft landscape. The use of the socio-cultural perspective to information literacy in the informal workplace provides an important contribution to the information literacy literature at large. The information literacy link this study establishes to the socio-cultural

elements of the material objects, practices, conventions, norms and the human body in an information landscape is worth noting.

The socio-cultural context of the information landscape determines the valued and sanctioned information that affords to make a person information literate. This study draws attention to the often-ignored social and corporeal information in the information literacy literature. The socio-cultural context of the informal workplace landscape affords the social and corporeal modalities of information. The social and corporeal modalities of information enable novice weavers to grow and become competent weavers of the informal workplace landscape. Barad's (1996:179-180) notion that "knowledge is always a view from somewhere" is likened to Grafstein's (2002:202) point that it makes less sense to be information literate in general rather than about something. This suggests a contextual view of information literacy and knowledge, and for that matter competence. Competence that is underpinned by information literacy can only be about something or a specific view from somewhere. This study reiterates Lloyd's (2006a:570) findings and that of Hicks, McKinney, Inskip, Walton and Lloyd (2022:13-14) that information literacy goes beyond the information landscapes of only librarians and educators. Hence when studying the information literacy of an information landscape, the socio-cultural context should be considered.

The findings show that becoming information literate in the Kente-weaving landscape goes beyond the knowledge construction of the work of the mind of the weavers. It includes the means of accessing the Kente information through observation and participation in the off-the-loom and on-the-loom practices to develop competence in the Kente-weaving landscape. Hence the Kente-weaving landscape is an empowering setting where information about the on-the-loom and off-the-loom practices can be accessed to equip a person with the 'know-how', 'know-that' and 'know-why' knowledge to become a competent weaver of the Kente-weaving landscape.

The result of this study implies that learning the Kente-weaving craft cannot be done outside of the Kente-weaving context. Access to Kente information required to make a person a competent weaver does not exist outside the social relations and the participation in the on-the-loom and off-the-loom practices of the Kente-weaving landscape. As the individual enters the Kente-

weaving landscape, he becomes entrenched in the Kente information through his participation and interaction with the advanced weavers. The findings show that Kente knowledge is not only a cognitive activity where the weaver has to know the history and background of the Kente fabric, but also a practical activity that is demonstrated by the ability to perform the off-the-loom and on-the-loom practices. This also implies that Kente knowledge cannot be documented and transferred using computer technology to make a person a competent weaver.

Some practical issues need to be considered by the stakeholders to facilitate information literacy and becoming competent in the Bonwire Kente Centre. These stakeholders are the novice, junior and master weavers. For the novice and junior weavers, the following are the practical implications:

- Firstly, the finding that being a competent weaver is expressed in the exhibition of Kente knowledge and mentorship capability implies that novice and junior weavers who want to be recognised as skilled cannot just specialise in one or two Kente activities. They must learn to develop the ‘know-how’ in all the on-the-loom and off-the-loom practices in the production of Kente fabric from start to finish at least capable of weaving six strips a day and without any defects. They must also learn how to identify Kente fabrics and the embedded patterns. They must be abreast with the history and background of the Kente fabric. They must learn to be capable of determining the quality of the Kente fabric as well as how and when to use the yarns and colours in weaving Kente fabric.
- Secondly, based on the finding that the context of the Kente-weaving landscape shapes the Kente information, novice and junior weavers need to access the Kente information to gradually transition to become competent weavers. Unlike in the formal setting such as academia, where pre-eminence is given to textual information as far as information literacy is concerned, in the Kente-weaving landscape, pre-eminence is given to the social and corporeal information that is accessed through interaction and participation. Learning to become a competent weaver in the Bonwire Kente Centre is underpinned by access to social and corporeal information. This implies that novice and junior weavers must focus on interaction and participation in the practices of the Centre to change their status and

become competent weavers of the Bonwire Kente Centre. They must focus on how to develop motor skills with material objects, specifically use of the tools.

- Thirdly, the findings suggest that the Kente information that underpins competence or *knowing* the Kente-weaving landscape is accessed through social relations and material-bodily experiences. It is therefore no wonder that in-person participant observation by the researcher provided a substantial understanding and insight into the Kente-weaving practices. This implies that both novice and junior weavers should make it a habit to be punctual and regularly be present in the Bonwire Kente Centre. Punctuality and regular attendance would enable them to access information on all the on-the-loom and off-the-loom practices of the Centre, even those that are not performed daily. In addition, the study implies that any person who wishes to learn and become competent in Kente weaving must be ready to become an apprentice to a master and be ready to observe, listen and engage in conversations in the Kente-weaving landscape.
- By the study suggesting that evidence of mentorship is a key element of competence, junior weavers who have developed the ‘know-how’ of all the integrative practices of the Kente-weaving landscape should get themselves apprentices, to meet the condition of mentorship capability.

The findings suggest that the lived actions of the weavers; especially those of the master weavers enable and facilitate information literacy and therefore learning of the on-the-loom and off-the-loom practices in the Bonwire Kente Centre. Hence, to continually afford novice and junior weavers with the social and corporeal information of the practices in the Bonwire Kente Centre, master weavers must perform the on-the-loom and off-the-loom practices for the novice and junior weavers to observe to grasp the trick of how they are done. They must provide them with avenues to practice under their supervision to fill the learning and information gap with their advice and feedback.

9.5 RECOMMENDATIONS

The study makes some recommendations to the stakeholders in the Kente-weaving landscape. A conceptual framework highlighting the relationship between information literacy and the weavers in the Kente-weaving landscape is recommended.

9.5.1 A conceptual framework for information literacy practice of weavers

From the findings, a conceptual framework for information literacy practice of weavers is proposed (i.e Figure 8.1). The conceptual framework for information literacy practice of weavers is a practice-learning structure that depicts the context in which learning to become a competent weaver is enabled by information literacy. It consists of engagement in the peripheral and full-participating practices (activities). Learning takes place through access to the craft information. The craft information consists of the following elements, on-the-loom and off-the-loom information. As depicted in Figure 8.1, the variables of the off-the-loom information constitute the following:

- History and background information
- Weft preparation information
- Warp preparation information
- Heddling and reeding information

The on-the-loom information consists of the following variables:

- Stretch and tie-up information
- Patterns-setting information
- Weaving techniques information
- Challenges and defects fixing information

The components of peripheral activities (less difficult practices) and full-participating activities (relatively difficult practices) explain the transformative process of making a novice weaver

become a competent or master weaver. The novice weaver becoming competent is underpinned by access to both on-the-loom and off-the-loom information. The novice weaver transitions to becoming a competent weaver by incrementally accessing the above information variables through participation in the on-the-loom and off-the-loom practices by means of information and influence work.

Through the reflective and reflexive activities of engagements in the peripheral and full-participating activities, coupling of the on-the-loom information and off-the-loom information takes place. The novice weaver absorbs and assimilates the information experiences to develop the know-how, know-that and know-why knowledge to become information literate and for the matter a competent weaver of the Kente-weaving landscape.

9.5.2 Stakeholders: novice, junior and master weavers

To enable a smooth transition from a novice weaver to a competent weaver, the following are recommended:

- Since competence constitutes the performance of all the weaving practices, novice and junior weavers should make a deliberate attempt to participate in all the on-the-loom and off-the-loom practices including how weaving defects are mended to access the on-the-loom and off-the-loom information needed to develop the competence of the Kente-weaving landscape.
- Since novice and junior weavers learn from the lived actions of the practices of the Kente-weaving landscape, master weavers are encouraged to stop the habit of contracting other weavers outside the Kente Centre to perform the core practices such as warp preparation. The master weavers are advised to perform the warp preparation practice in the Kente Centre for the novice and junior weavers to observe and access the warp preparation information required to develop the know-how of warp preparation. Novice and junior weavers are therefore advised to do away with the notion that the warp preparation practice is challenging and make all efforts to learn.

- Novice and junior weavers should not take the practice of trial and error and participation in conversations at the Centre for granted. They should be regular, punctual and participate in workplace conversations. This will enable them to access the necessary on-the-loom and off-the-loom information to make them competent and information literate in the Kente-weaving landscape.
- Novice and junior weavers are advised to develop the aesthetic knowledge of the Kente-weaving landscape. They must engage with master weavers to develop the skills to determine what constitutes quality in the Kente-weaving landscape.
- The novice and junior weavers must ensure that they develop the know-how necessary to identify the Kente fabrics and patterns.
- The novice and junior weavers should improve their weaving speed to be able to weave six strips a day.
- Knowledge of the history and background is important to the practice of Kente weaving. Novice and junior weavers are therefore advised to familiarise themselves with the background information of Kente weaving.
- Novice and junior weavers must learn to use the material objects in the accepted and sanctioned manner in the Kente-weaving landscape.
- Novice and junior weavers must train or develop their senses to understand the cues of the Kente-weaving landscape.

9.6 DIRECTION FOR FUTURE STUDIES

Despite the original contribution to knowledge this study makes, there are some limitations. One apparent shortcoming is the six months spent in the ethnographic field. Ideally, a minimum of one year would have been an appropriate length of time for an ethnographic study. This would have enabled the researcher to observe the learning trajectories of novice weavers transitioning to become master weavers. Also, it would probably have avoided the situation where the researcher was the newest entrant among the novice weavers at the time of the study and therefore could not get the opportunity to observe and learn the trajectory of any new entrant after him at the Bonwire Kente Centre. Against this backdrop, future studies could employ

ethnography for longer than one year in the field. Alternatively, future studies could also employ phenomenology as the research design to ascertain and describe how information literacy in the Kente-weaving landscape is enacted.

The study has primarily been concerned with the Bonwire Kente Centre as an informal workplace. The analysis and discussion have focused on the on-the-loom and off-the-loom practices that enable information literacy of Kente-weaving in the Bonwire Kente Centre. Though the practices of the Bonwire Kente Centre are embedded within the cultural and historical traditions of the Bonwire community and therefore could be regarded as indigenous knowledge, the focus of the study does not allow for the discussion to include craft as an indigenous knowledge that flows among community members. This is because the study focuses on the Kente weaving craft as a profession in the context of a workplace landscape (the Bonwire Kente Centre). The attention was on how learning takes place in the Kente-weaving workplace and not the Kente-weaving community. Following this, further study can look at Kente weaving from the indigenous knowledge systems perspective where Kente weaving is seen as community “property” that is shared in the Bonwire community.

The study also notes that Kente weaving is a family-inheriting craft where some of the novice weavers started learning from their uncles and fathers at home before coming to the Bonwire Kente Centre to continue. Also, there are family members who are either master, junior or novice weavers at the Bonwire Kente Centre. Hence, a future study can investigate how social structures like family influence the information literacy of the second generation of Kente weavers where the focus could be on how the weaving practices of fathers and uncles deepen their sons' and nephews' knowledge about Kente weaving. In addition, the information literacy practice of novice weavers who have relatives as weavers and those who do not could be compared.

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APPENDICES

APPENDIX 1: Observation information sheet

Date:.....

No.	Observation aims	Which practices need to be observed	What is known from the observation	Comments
1	How the practices of the Kente-weaving landscape are performed.			
2	How novices become informed of the practices of the Kente-weaving landscape.			
3	How novices develop the know-how of the practices of the Kente-weaving landscape.			
4	How developing the know-how of the practices relates to the body.			
5	How the performance of the practices relates to the material objects.			

APPENDIX 2A: Semi-structured interview questions (English)

Preliminary questions for all level of weavers

- For how long have you been in the Kente weaving?
- Where would you classify your knowledge of Kente weaving in relation to other weavers?
- Per your knowledge of Kente weaving, which level (group) of weavers do you consider yourself to belong to?

1. Master and junior weavers

What constitutes competence in the Kente-weaving landscape?

- Can you tell me who a competent Kente weaver is?
- What does it mean to say a person is competent or has knowledge in Kente weaving?
- What are the characteristics or attributes of a competent Kente weaver? How do you know that a person is a competent Kente weaver?
- What must a person know about Kente weaving to be regarded as a competent Kente weaver?
- What must a person be able to do to be regarded as a competent Kente weaver?

How do novices become competent weavers enabled by information literacy in the Kente-weaving landscape?

- How does a person get access to the knowledge or become competent in Kente weaving?
- Can you walk me through how you learnt or became a competent weaver?
- What sort of activities did you start with while learning? What followed subsequently?

How does workplace interaction and participation deepen or enact novices' information literacy?

- Is there any way participation or interaction with other weaving practitioners in the Kente Centre helps to make a person *know* or become competent in Kente weaving? If yes, how?
- Can you describe to me how working with other practitioners in the Kente Centre facilitate or enable competence building?
- Can you tell me some of the things you learnt through your interaction and participation with other weavers in the Kente Centre and how you learnt them?

How does becoming information literate relate to material objects in the Kente-weaving landscape?

- What are the things person must know or be capable of in relation to the sanctioned material objects (tools and materials) to be regarded as a competent weaver (information literate)?
- Can a person tell from a woven Kente that the maker is a competent or novice weaver? If yes how?
- How can a person tell from examining the physical features of woven Kente fabric that the maker is competent or a novice?
- What shows on the woven Kente fabric that the maker is a competent or a novice weaver?
- How does a person access information from a crafted fabric to conclude that a piece of woven Kente fabric is a show of poor or excellent craftsmanship?
- Are there any information skills a person should develop concerning working with or upon material objects to be regarded as a competent weaver (information literate)? What are they?

How does the human body facilitate information literacy in the Kente-weaving landscape?

- Which part of the body should a person be able to (learn to) use to perform an action or interpret 'something' to be regarded as a competent weaver (information literate)? (e.g. eye, nose, ear, tongue, skin)

- Which information-sensing (sensory-information-seeking) skills should a person develop as part of the learning process to be considered a competent weaver? What are they? How would you describe them? Can you demonstrate and explain them to me?
- Which part of your body do you use to experience (sense) information in the Kente Centre and how?
- How does the body access the afforded information when material objects are being worked with or upon?
- Which part of the body should a person be expert in using (and to do what) to be considered a competent weaver?

2. Novice weaver

- For how long have you been learning Kente weaving?
- What sort of activities do the novices start with? What did you first learn?
- Can you walk me through your learning journey experiences?
- What do you think is key to your learning to make you a competent weaver?
- How does your presence (being) in the workplace enhance or facilitate your knowing (learning) of the Kente-weaving practice?
- How has your interaction and participation in the Kente-weaving enhanced your learning or deepened your know-that, know-why and know-how knowledge in the quest to become a competent weaver of the Kente-weaving practice?
- Can you give me examples of some of the things you learnt so far and how you learnt them?
- How does working with material objects help you to be a competent weaver? What have you learnt in relation to material objects that you think have improved your competencies in weaving?
- Which part of your body do you think is crucial and therefore needs to be developed and trained to be a competent weaver and why?

NOTE: There will be specific details where needs be, especially where there is the need for clarification and details.

APPENDIX 2B: Semi-structured interview questions (Twi)
Nsemmissa a mmuaee enye ketee

Nnianim nsemmissa a ekoma kentenwenefoɔ a wɔwɔ gyinapɛn ahodoɔ no nyinaa

- Mmere tenten sen na woadi wɔ Kentenwono mu?
- Se wode nimdee a wo wɔ no Kentenwono mu no toto kentenwenefoɔ nkaee no ho a, gyinapɛn ben na wode wo ho besi? (abɛɛfo, /kentenwonefoɔ nkumaa , maseta/obi a wakwadare wɔ kentenwono mu)

1. Maseta ne kentenwonefoɔ nkumaa/ abɛɛfo

Deen na ekyere se obi akwadare wɔ kentenwono mu?

- Se yeka se obi akwadare wɔ kentenwono mu a ɔne hwan?
- Se yeka se obi akwadare wɔ kentenwono anaase ɔwɔ ho nimdee a, na ekyere sen?
- Su ahodoɔ ben na obi a wakwadare wɔ kentenwono mu da no adi? Eyee den na wohunu se saa oniiko no akwadare wɔ kentenwono mu?
- Edeen na ese se obi hunu fa kentenwono ho ansa na yeatumi aka se wakwadare wɔ mu?

Ekwan ben so na abɛɛfo nam nimdee so beye ɔbenfo wɔ kentenwono adwuma no mu?

- Ebeye den na obi anya nimdee afa kentenwono ho anaase wakwadare wom?
- Wobetumi akyere me ɔkwan a wofaa so sua kentenwono anaase wo kwadaree wom?
- Bere a woressua no, dwumadie ahodoɔ ben saa na wode hyee ase? Deen na etoatoa so?

Sen na adwumam nkitahodie ne a hye wɔde wɔn ho hye dwumadie ahodoɔ mu no boa abɛɛfo ma wɔn ase tim anaase ema wɔnya nimdee ho nhunumu?

- So, ɔkwan bi wɔ ho a, wo ne afoforo a wɔnwono kente no bi nya nkitahodie anaase modi dwuma boa ma obi hunu kentenwono anaase ɔkwadare wom? Se aane a, kwan ben so?
- Wobetumi akyere me senea wo ne afoforo nkaee a wɔnwono kente no bi no adi dwuma wɔ kentenwono adwuma no mu aboa ama obi kwadare wom?
- Wobetumi aka nnooma binom a wonam nkitahodie anaase adwumaye so sua firii afoforo nkaee a wɔnwono kente no nkyen wɔ kentenwono ne ɔkwan a wofaa so suaee no akyere me?

Sen na nimdee a obi nya ne nnooma ahodoa a wode di dwuma wa Kentenwono mu no wa twaka ?

- Nnooma ben na ese se onipa bi hunu anaase otumi de nnooma a wode nwono kente ye ansa yetumi akasa wakwadare wa kente nwono mu (onim de) di?
- So, obi betumi ahwe kente a yeawono na waka se kentenwonofoa akwadare adwuma no mu anaase oye abeefo? Se ete saa a, okwan ben so?
- Obi beye den na woatumi ahwe kente a yeawono su so aka se kentenwonofoa akwadare adwumano mu anaase oye abeefo?
- Deen na eda adi kyere se kentenwonofoa no akwadare adwuma no mu anaase oye abeefo?
- Kwan ben so na obi fa so nya nyinasoa firi ntoma a yeawene mu na oka se Kente bi nye papa anaase eye papa?
- Nyinasoa no ho nimdee bi wa ho a ese se obi nya firi nnooma ahodoa binom a ode di dwuma no ho ansa na yeahunu no se oye kentenwonofa a wakwadare adwuma no mu anaa? Ebi ne deen?

Dwuma ben na nipadua no di bere a obi rehwehwe se obekwadare wa kentenwono adwuma no mu? Kwan ben so na nipadua no boa ma obi kwadare wa kentenwono adwuma no mu?

- Honam akwaa ben na ese se obi sua se ode bedi di dwuma ansa na yetumi agyina so aka “biribi” ekyere wakwadare wa kentenwono mu? (Nhwesoa: ani, aso, tekrema, wedee)
- Nimdee sononko ben na ese se obi nya wa bere a osua adee no ansa na wabu no se kentenwonofoa a waben? Ebi ne deen? Kwan ben na wobefa so akyerkyere no? Wobetumi aye oyekyer bi na wakerkyere mu akyer me?
- Wo honam akwaa no mu dee ewo he na wote ne nka pa ara yie wa Kentenwono Beae ho, na ekwan ben so na wote nka?
- Kwan ben so na honam akwaa no betumi anya nkratoa ehia bere a wode nnooma ahodoa a wode nwono kente redi dwuma?
- Honam akwaa no mu dee ewo hen na ese se obi de di dwuma yie ansa na wabu no se kentenwonofoa a waben?

2. Abæfo

- Mmerε dodoε sen na woadi wε kente nwono sua no mu?
- Dwumadie ahodoε ben na wεn a woresua kentenwono foforo de hye asee? Deen na wodii kan suaε?
- Wobetumi de me afa nimdee ho suahunu ahodoε a woanya wε woadesua mu no mu?
- Deen na wosusu se εho hia pa ara bere a woresua adeε a εbema woakwadamare wε kentenwono mu no?
- Kwan ben so na w'adwumakorε boa wo ma wohuhu kentenwono ntentem bere a woresua nwono no?
- Kwan ben so na wo nkitahodie ne hye a wode wo ho hye adwumaye kentenwono mu no aboa wε w'adesua mu anaa atre wo nimdee bere worebε mmōden se wobekwadamare wε kentenwono adwuma no mu no?
- Wobetumi ama me nnoεma a εbesi sεsεε woasua no ho nhwεsoε ne εkwan a wofaa so suaε?
- Kwan ben so na nnoεma a wode di dwuma no boa wo ma wokwadamare kentenwono mu? Deen na woasua afa nnoεma a wode nwene kente ho a wosusu se aboa wo ama worekwadamare wε kentenwono mu?
- Wo honam akwaa no mu dee εwε hen na wosusu εho hia pa ara a, eno nti na εhia se wode fa nteteε mu yie seneε ebeye a wobetumi akwadamare kentenwono mu?

APPENDIX 3: Codes-to-themes table

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
1	Knowledge of Procedures and techniques	<p>A competent weaver is one who knows and can perform all the techniques and procedures in Kente weaving. --Kankam Yeboah, a master weaver</p> <p>A competent weaver is one who can produce Kente fabric from start to finish. A competent weaver knows all the weaving techniques from start to finish. I mean the competent weaver must know the weaving procedures from A-Z. If a person does not know how to perform the weaving procedures from A-Z, he is not yet qualified to be considered a competent weaver. --Kwame Bonsu, a junior weaver</p> <p>If a weaver is unable to perform even one of the required processes and techniques of weaving, he cannot be regarded as a competent weaver. --Nana Agyei, a master weaver</p> <p>These days, many novice weavers do not learn the warp preparation as well as the passing of yarns in the reed and heddles. They prefer somebody to do it for them for a fee. I must state if a weaver does not know how to prepare the warp as well as pass the warp yarns through the 'eyes and dents of the heddles and reed</p>	Kente production knowledge	Kente knowledge	Weaving-related knowledge	Procedures and techniques knowledge

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>respectively, he cannot consider himself a master weaver. In other words, if a weaver cannot perform all the weaving techniques from A-Z, he cannot classify himself as a master or competent weaver. -- Kwaku Marfo, a master weaver</p> <p>When we say that somebody is a competent weaver, it means that he knows everything about Kente. He knows how to prepare the warp for weaving. He knows how to pass the warp ends in the heddles and reed. He knows how to set up the loom for weaving. He knows how to tie up the warp in the loom to begin the weave. He knows how to programme patterns on the warp.-- Kwadwo Afriyie, a junior weaver</p> <p>A person is regarded as a competent weaver when he knows how to do everything about Kente weaving. The following are what he should be capable of; He should be capable of warping the yarns. He should be capable of setting up the loom on his own. He should be capable of performing tying-up in the loom. He should know how to make all patterns or designs. If you know how to do these techniques then you are regarded as a competent weaver.....He cannot be regarded a</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>competent weaver if he is unable to perform warping, set-up and tie-up the warp in the loom and finally make all patterns. --Nana Agyei, a master weaver</p> <p>The competent weaver has to know how to wrap the yarns on the bobbins. He has to know how to warp the yarns using the bobbin carrier. He has to know how to pass the warp ends in the heddles and reed. He has to know how to tie up the yarns on the cloth beam and the drag stone. He has to know how to stretch the warp yarns in the loom for the right tension. He has to know how to weave and make patterns on the fabric. If he is able to do all these, he would be regarded as a competent weaver. -- Kankam Yeboah, a master weaver</p> <p>I observed that the winding of yarns on the bobbins which are subsequently inserted into the shuttle is the procedure and technique for the weft preparation. Also, the warping technique is for the warp preparation. These two techniques are preparatory techniques that are performed outside the loom. Like the other techniques, without the performance of weft and warp preparation techniques, weaving cannot take place. Hence, if a weaver cannot perform the techniques of weft and warp preparation, he would be</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>unqualified to be considered a competent weaver. In the production of a Kente fabric, the procedures and techniques involve the winding of yarns on the bobbins, warping, heddling, reeding, tying up, setting patterns and weaving techniques. I observed that the master weavers have no problem performing all these procedures and techniques. –Observation</p> <p>What I know is that, when we say somebody is a competent or master Kente weaver, it means that person knows everything about Kente weaving....._He should be capable of weaving fabric with single, double and triple weaving techniques. --Kwabena Amoako, a master weaver.</p> <p>I have to know the single, double and triple weave. There are other types of double weave, which my uncle is currently weaving over there; it is called ‘dwen ntoma’. If I am able to do all these weaves, then I would consider myself to be a competent weaver. --Owusu Adonten, a novice weaver</p>				
2	Weaving defect-free fabric	<p>A competent weaver should be able to weave Kente fabric without defects. --Yaw Marfo, a master weaver</p> <p>We cannot tell from the actions or personal attributes of a weaver</p>				Defects-free weaving knowledge

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>whether he is a competent weaver or not; it is about the product he produces. The Kente fabric he weaves tells it all.A competent weaver should be able to weave Kente without defects such as frayed selvage ('atwuntwum'). Also, there should not be broken ends ('Efoɔ') in the Kente fabric he has woven.</p> <p>.....You cannot tell me that person who has woven Kente fabric full of defects such as broken ends ('Efoɔ') is a competent Kente weaver. -- Kwabena Amoako, a master weaver</p> <p>When a single yarn among the warp gets broken (torn) while weaving, a non-competent weaver does not have the know-how to mend it and therefore causing the appearance of broken ends (Efoɔ) on the woven fabric. I mean to say that the incompetent weaver, is unable on his own to mend the occurring errors when weaving without the help of a master weaver. In effect, a competent weaver is able to weave fabric without any fault such as the appearance of defects such as broken ends (Efoɔ). Also, when there is a broken end (Efoɔ), the master weaver is able to mend it. A competent weaver is able to mend fault on his own. -- Nana Agyei, a master weaver</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
3	Fast-weaving skill	<p>For now, I am a slow weaver. If I am able to weave faster I would consider myself a competent weaver. --Yaw Oppong, a novice weaver</p> <p>I would consider myself competent when I am able to weave about six strips of fabric a day.-- Sika Afranie, a novice weaver</p> <p>One characteristic of the master weavers is that they weave relatively faster than novice and junior weavers and are therefore able to weave many Kente strips in a day. Novice weavers could spend the whole day weaving one strip of Kente fabric. A strip of Kente is 64 inches long. As a novice weaver, I wove slowly; I could only weave a third of a strip a whole day.-- Observation</p>				Weaving speed
4	Fabrics and Patterns identification knowledge	<p>There is a Kente fabric called Fatia fata Nkrumah. The Fatia fata Nkrumah Kente fabric has some patterns. So a competent weaver should know the patterns on Fatia fata Nkrumah Kente fabric. --Kwabena Amoako, a master weaver</p> <p>I observed that master weavers could call out the name of Kente fabrics and patterns without slack as compared to junior or novice weavers. Some of the novice and junior weavers could not identify some fabrics and patterns shown to them. From the</p>	Identification capability		Identification knowledge	

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>ease at which the master weaver could mention the names of the fabric or patterns appears to me that the master weavers know the names of all the fabrics and the patterns. – Observation</p>				
5	Background knowledge	<p>When we say that somebody is a competent weaver, it means that he knows everything about Kente. He knows how Kente weaving started in the olden days.--Kwadwo Afriyie, a junior weaver</p> <p>A competent weaver must know the history of Kente weaving.--Oti Boateng, a junior weaver</p> <p>I noticed that some of the Kente fabrics and patterns are named after the weavers who first wove such fabric or patterns. Also, there are stories of how some of the Kente patterns came into being. An example of such fabric is Torku kra ntoma (Literally means Torku’s soul fabric). The story is told that a fetish priest fore-told Torku that he would die the very day he finished weaving a specific fabric and it did happen. Hence, that specific type of fabric is named after him. I observed that being aware of such an account could prove how well-versed the weaver is in the history of fabric history. –Observation</p> <p>Some of the fabrics were</p>	Context knowledge		History and Background knowledge	

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		given new names. An example of such fabric is Fatia fata Nkrumah. The type of patterns that originally make up the Fatia fata Nkrumah was formerly called Obaakofoo mmu man. --Observation				
6	Quality determination capability	<p>A competent weaver is able to determine the quality or otherwise of a Kente fabric.--Kwadwo Afriyie, a junior weaver</p> <p>I observed that some weavers including a master, junior or even some novice weavers have the know-how to determine the quality of a Kente fabric. They hold or look at the woven fabric and pass judgment as to whether it is woven properly or not. --Observation</p>	Quality determination capability		Quality determination knowledge	
7	Yarns knowledge	<p>A competent weaver should know much of the yarns that are used in weaving Kente. Some of the yarns are soft, others are hard. He should know what the soft and hard yarns are respectively used for. --Kwaku Marfo, a master weaver</p> <p>I observed that cotton yarnsare mostly used as the warp; the rayon yarns are are mostly used as the weft. --Observation</p> <p>A competent weaver should know how to blend colours and know which colours combination is best for which Kente fabric or pattern.----Ofa Owusu, a master weaver</p> <p>I observed that though</p>	Yarns knowledge		Yarns and colours combination knowledge	

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>weavers may use any colour for any fabric or pattern upon clients' request, there are traditionally preferred colours for some fabrics and patterns. I observed that for the Fatia fata Nkrumah the traditionally preferred colours are black or blue; Adwini asa are red, gold and green; Torku kra ntoma are white, red, blue and green; Sika futuro is gold.— Observation</p>				
8	Teaching capability	<p>..... Also, I have taught some people how to weave Kente. A competent weaver should be capable of teaching others.-- Yaw Marfo, a master weaver</p> <p>The competent weaver has knowledge about Kente weaving and is able to teach others. ----Ohemeng Yeboah, a junior weaver</p> <p>I observed that all the master weavers have apprentice(s) learning under them or have trained people in the past of which some are now master weavers with apprentice(s). – Observation</p> <p>I observed a weaver showing a novice how to set a pattern on the warp. He stood beside the loom as the novice sat in, telling the novice how to set a pattern on the warp. When the novice could not get it, the master weaver sat on the loom and instructed the novice to look on as he showed the novice how to set a pattern in the loom.--</p>	Coaching capability	Mentorship capability		

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		Observation				
9	Information about winding yarns on the bobbin	<p>The first thing the novice learns is how to wind yarns on the bobbins. The novice is shown how the bobbin is inserted in the bobbin winder and how to wind to get the yarns on the bobbins. The novice is shown how to wind the yarns on the bobbins firmly. The novice is instructed to exert effort to stretch and hold firmly the yarn as it is being wound on the bobbin through the winding of the bobbin winder. The master weaver does it first to show the novice how to wind yarns on the bobbin using the bobbin winder. As the master weaver does it for the novice to see, he would tell the novice the ‘dos’ and ‘dents’ while winding yarns on the bobbins. The novice is taught not to wind the yarns at the centre or near the end of the bobbin only but to spread the yarns evenly on the bobbin. The pressure from the winding of the yarns on the bobbins can cause cuts on the fingers if care is not taken. So we always advise the novices to cover their fingers with something before they wind the yarns on the bobbins.--Kwaku Duodu, a master weaver</p> <p>How I learnt Kente weaving was interesting. The preparation of the bobbin is the first thing every novice weaver would learn to do. My father showed me how to prepare the bobbin using</p>	Information on bobbin preparation	Access to Kente information	Access to off-the-loom Kente information	Weft preparation information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>the bobbin winder. He did it several times for me to see. He always inserted the bobbin in the bobbin winder and then placed the tip of the yarns on the bobbin and then held and wound the holder of the bobbin winder to get the yarns wound on the bobbin. So I was the one who used to wind yarns on bobbins for him. --Kofi Oduro, a junior weaver</p>				
10	Warping technique information	<p>The novice has to associate and mingle with a competent weaver to learn. As he associates with a competent weaver, he would see how the competent weaver prepares the warp.....for weaving. - -Kwadwo Afriyie, a junior weaver</p> <p>The warp preparation is difficult to learn. I learnt how to prepare the warp following, assisting and observing my elder brother do it. He would hand over the bobbin carrier to me and tell me to do it as he did. He would observe as I do it and correct me when I made mistake.--Kwaku Marfo, a master weaver</p> <p>I observed that warp preparation is done with mathematical consideration with regards to the number of dents in the reed which is mostly a hundred (100). The number of yarns always has to be an even number. Warp preparation starts with erecting three sets of stands ('ntene nnua') in a straight line. One of the two end</p>	Information on warp preparation			Warp preparation information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>stands is made angular in shape. The middle stand is partitioned to ensure the yarns are not mixed up during the warp preparation. The yarns which are always in cones/bobbins are placed on the bobbin carrier ('akonam') and are stretched around the warp stands. The bobbin carrier is handled diagonally when stretching the yarns around the stands as shown in figure 2.27 to allow for easier spinning and releasing of the yarns. Upon reaching the angular stand, the weaver performs the technique called 'Kina hye'. Here, the weaver takes the yarns in pairs and geometrically crosses the yarns around one of two stands forming the angle where the yarns pass at the back of the other stand. The weaver repeats this process until he gets the desired length he wants. While on the warping stand, the different colours of yarns were tied separately together with a knot called 'nyansapɔ'. The 'nyansapɔ' knot is tied by holding the yarns from one of the stands and twisting it 360 degrees to tie and folded geometrically. The 'nyansapɔ' knot is flexible and can be loosened or tightened just like a necktie.—Observation</p> <p>I would first teach the person warping. I would do the warping of yarns for him to observe it. There are</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>technicalities in warping that I would have to teach him. This technique includes the performance of the ‘Kina hye’ technique. The ‘Kina hye’ technique is the stretching of the warp through an angled stick. -- Kwabena Amoako, a master weaver</p>				
11	Heddling and reeding techniques information	<p>After learning how the warp preparation is done, I would make sure the novice observes me pass yarns in the heddles and the reed so that he learns how to do it.-- Kankam Yeboah, a master weaver</p> <p>Here, the novice weaver observes how the warp ends are passed through the ‘eyes’of the heddles..... For every ‘eye’ of the heddles whether front or back, two warp yarns are passed through alternatively for the single weave. For the double weave, four warp yarns are passed through the ‘eyes’ of the first set of heddles front and back alternatively till the warp yarns are all used up. The four warp yarns are then divided into two pairs (two yarns each) to pass through the second pair of heddles just as in the single weave. If the warp yarns are not passed through the ‘eye’ of the front and back of the pair of heddles alternatively, it would be difficult to press down the treadle to open up the warp..... --Kwame Bonsu, a junior weaver</p> <p>.....But for passing</p>	Information on heddling and reeding			Heddling and reeding information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>the warp through the reed....., my brother showed me. He showed me how to use a broomstick to pass the warp ends through the dents of the reed from one end and pull it from the other end using my finger. --Kwabena Apam, a novice weaver</p> <p>I observed that the warp ends are taken in a set of two pairs (making four warp ends), a pair each from both the front and back heddles. A set of two pairs (four warp ends) are placed through each dent of the reed till all warp ends are used up. I observed that a broomstick is used to do the reeding technique. The combined two pairs of warp ends are placed on the reed and the broomstick is used to push them through each dent and pull through from the other end of the reed.-- Observation</p>				
12	History information	<p>I observed that almost all the weavers have heard of the history of Kente. The weavers have relatives who are/were Kente weavers and have heard the history of Kente weaving from them. Also, it is part of the socialisation of the Bonwire community. –Observation</p> <p>There is a historical background to the Kente weaving. So the novice weaver would first be taught the history of how Kente began in the Bonwire community. The novice would be taught how Kente</p>	Information about Kente history and background			History and background information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>weaving has evolved to this modern day. The historical trends of what used to be done and what is currently being done as far Kente weaving is concerned.-- Kwame Bonsu, a junior weaver</p> <p>The names of the people who first wove Kente in Bonwire were mentioned to me. Also, some of the equipment that were used in past were shown to me in the exhibition room to appreciate how Kente weaving used to be then and now.--Observation</p>				
13	Stretching and tying up techniques information	<p>I would also show the novice how to stretch and tie up the warp in the loom and on the drag stone. --Ofa Owusu, a master weaver</p> <p>After this, the novice weaver learns how to stretch and tie the warp to the cloth beam and the drag stone to start the weave. Here also, the master weaver does it at the first instance for the novice to see. --Kwame Bonsu, a junior weaver</p> <p>I observed that the stretch and tie-up techniques involve making two types of knots namely ‘Agonoye’ and ‘nyansapo’. The Agonoye knot is tied around the reed to the cross beam. The Agonoye knot is an adjustable knot that enables the reed to be positioned or adjusted to suit the weaver. For the heddle, both the</p>	Information on stretching and tying-up yarns		Access to on-the-loom Kente information	Stretch and tie-up techniques information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>‘Agonoye’ and ‘nyansapo’ knots are tied at one end each through the pulley on the cross beam as illustrated in figure 2.4. Also, I observed that the stretch and tie-up techniques involve pulling the warp through the reed and performing a technique called ‘Eterebo’. The ‘Eterebo’ technique involves dividing and making three ‘nyansapo’ knots from the warp on a wooden bobbin against the cloth beam as illustrated in figure 2.31. After the ‘Eterebo’ technique, ‘nyansapo’ knot is tied on a wooden stick called ‘Abotidua’ to the drag stone. Observation</p>				
14	patterns setting information	<p>There is no pattern in the single weave. There are patterns in the double weave. The novice weaver is first shown how to programme the patterns on the warp. For example, the master weaver would show the novice weaver that for this particular pattern, we do it this way; you raise one warp yarn and three warp yarns down, you then pass a different nylon thread over and under the warp yarns then you tie it up to the cross beam.--Kofi Oduro, a junior weaver</p> <p>.....The novice weaver is introduced to the ‘keys’ in setting up the patterns. The ‘keys’ involve mathematics in the determination of which</p>	Information on setting patterns			Patterns-setting information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>warp yarns to raise or lower for a specific pattern before tying to the cross beam. When the novice weaver becomes perfect in setting up patterns, he can set and weave any patterns he wants. --Kwame Bonsu, a junior weaver</p> <p>In the selection of ‘key’ for the pattern setting, I observed that the right treadle is pressed down using the right foot. This opens the warp into two halves; one up, the other down. The up-half of the warp is worked on first. With the up-half, I observed that the pair of warp (‘gyesoa’) in the first dent of the reed from the right is raised; the two pairs of warp (‘oba’) in the next two dents of the reed are lowered. Then, the next pair of warp in the next dent of the reed is raised and the two pairs of warp that follow in the next two dents of the reed are lowered. This process continues till all the up-half of the warp has been used up. It is then tied upward on the warp closer to the warp beam. After the up-half of the warp had been worked on, the down-half of the warp is worked on. I observed that with the down-half of the warp, the process was the opposite of what was done with the up-half of the warp. Instead of raising the pair of warp (‘gyesoa’) in the first dent of the reed and lowering the two pairs (‘oba’) in the next</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>two dents of the reed as was done with up-half, it was done the other way round where the pair of warp in the first dent of reed from the right was lowered. Unlike the up-half of warp, the down-half is tied downward. Patterns cannot be woven on fabric without the selection of 'key' on the warp.--Observation</p> <p>I observed that in the making of the Akyem pattern, the treadle is not pressed down as with those patterns which involve the 'key' selection technique. There is no 'key' involved in the making of the Akyem pattern. The warp in the first two dents of the reed is raised and the warp in the second two dents of the reed is lowered. The warp in the third two dents of the reed is raised and the warp in the fourth two dents of the reed is lowered down. In other words, the warp is raised and lowered alternatively from the first two and the second two dents of the reed till all the warp is used up. Those warp yarns that are raised are tied upward nearer to the warp beam.-- Observation</p> <p>For the setting up of patterns on the warp, I learnt from observing others do it here at the Kente Centre.--Agyare Ansukun, a junior weaver</p>				
15	Actual weaving	The novice has to associate and mingle with a	Information on the			Weaving techniques

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
	information	<p>competent weaver to learn. He would also see and learn from how the competent weaver weaves Kente fabric. --Kwadwo Afriyie, a junior weaver</p> <p>For a person to get access to knowledge or develop the know-how about Kente weaving, he has to be an apprentice to a competent or master weaver to take him through all the processes and techniques of Kente weaving. First, he is made to observe the techniques and processes taking place in the loom when the master weaver is weaving. He is made to observe the movement of the hands and legs when the master weaver is weaving in the loom for about a week. Afterward, he is told to sit on the loom to practice what he has learnt for about a month as the master observes and corrects him. -Nana Agyei, a master weaver</p> <p>After doing this for some time, I was introduced to weaving where I started with single weaving ('Ahwepan'). My master told me to look on as he wove the single weave. He showed me when and how to throw the shuttle and put my feet on the treadle to weave by doing it himself. So after some time, he told me to try and see if I got it and whether I could weave. So I sat on the loom and tried under his watch and</p>	weaving aspect			information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>direction. I continued with the single weave for some time till my master was okay with how I was weaving Kente. He later introduced me to the double weave. --Kwasi Appiah, a novice weaver</p> <p>I noticed that the single weave technique is easier to weave as compared to the double and triple weave. The triple weave technique is the most difficult technique to learn. The single weave is most often the technique novice weavers are first introduced to when learning. That notwithstanding, I noticed that some novice weavers were exposed to the triple-weave technique by their relatives at home and therefore first learn how to weave the triple weave before they gradually weave the double and the single weave techniques.-- Observation</p>				
16	Challenges and defects fixing information	After some time, the master weaver would show the novice weaver how to fix some weaving challenges such as warp and heddle breaks. For the heddle breaks, the preceding nylon threads that make the ‘eyes’ of the heddles should be counted and separated to identify the specific thread to tie or fix. Mostly, for every ‘eye’ of the heddles, two warp yarns pass through, so when there is a warp break, the specific warp yarn that is broken or torn would have to be	Information on challenges and defects fixing			Challenges and defects fixing techniques information

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>looked for, trace through the reed, heddles and the set patterns and tied with the other end to continue the weave. --Agyare Ansukun, a junior weaver</p> <p>He showed me how to fix warp breaks in the course of weaving. He told me to look for the broken warp yarn and then pass it through the space of the heddle from which it got broken or torn to the reed before it is tied. - -Sika Afranie, a novice weaver</p> <p>At that time, I did not know how to prepare and fix warp breaks, so the master weaver used to do those tasks for me. So there was this particular day that my master was busy and could not make time to fix the warp breaks for me. He just described to me how to do it and I did it without any defect. That is how I learnt how to fix warp breaks. Since then, I fix the warp breaks on my own. --Kofi Mensah, a master weaver</p>				
17	Opportunity to monitor and guide	Here, the sitting arrangement has been made in such a way that novices do not sit in one place; rather they sit around a junior or master weaver. Every novice sits nearer to a junior weaver or master weaver so that their work progress can be monitored by someone more advanced than them. This enables the novices to be noticed and corrected when they are making mistakes at the	Opportunity to receive guidance	Access to the workplace affordance	Information affordance through mentoring and guidance support	

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>early stage. Master weavers at times go around to inspect the work of the novice and junior weavers to see whether they are doing the right thing. --Yaw Marfo, a master weaver</p> <p>Here, every competent person or master weaver can teach any novice weaver whether he is his apprentice or not. When a novice is weaving Kente and he is not doing the right thing, and master weaver who notices would correct him on how to do it right, regardless of him being his apprentice or not..... For example, the other time when I reported to work, I noticed one novice weaver who was performing the tying-up technique in the loom. From how the novice weaver had done the tying-up in the loom, all the fabric he would have woven would have turned upside down. So I notified him and told him to stand out of the loom; I sat on the loom to do the correct tying-up technique for him. --Nana Agyei, a master weaver</p> <p>When I sat on the loom to weave, the guidance that I received did not come only from the master under which I was an apprentice. Other weavers including junior weavers guided me and gave me directives on how to go about the weaving. --Observation</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>I am still learning Kente weaving; it is not everything that I know and am capable of doing. So the master weavers correct me when they see a mistake with the weaving works I engage in. You see that I have stopped weaving right now. I was told to stop the weaving by one master weaver. He saw some mistakes in my work that need to be corrected. He saw me struggling to tie up the warp yarns on the cloth beam. He told me to wait for my master as I do not have the experience to do it. --Kwasi Appiah, a novice weaver</p> <p>As you see right now, I am surrounded by many competent weavers, so if there is anything wrong or amiss with my work or if I face any challenge, they would intervene and assist me. For example, many learners have a challenge in fixing warp and heddles breaks; they always need help from experienced weavers to show them how to fix them. That is how I learnt how to fix the warp and heddle breaks. I learnt how to fix them as he was assisting me to fix the warp and heddles breaks some time ago. --Yaw Oppong, a novice weaver</p>				
18	Opportunity to observe	Those of us who hail from this community, have relatives who are Kente weavers. So we grew up seeing them weave Kente.	Opportunity to observe		Information affordance through observation and learning by	

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>So by assisting them we learn. --Ofa Owusu, a master weaver</p> <p>Through the engagement, novices who do not know how to set up the loom and pass warp through the heddles and reed can learn by seeing others do it.-- Kwaku Duodu, a master weaver</p> <p>The master weavers keep us, the novice and junior weavers closer to them so that we may learn from them. I have learnt how to weave Kente at a fast pace. There used to be one master weaver here, he used to weave very fast. I aspired to weave as fast as he did. So I moved my loom closer to his so that I might be able to observe how he was able to weave at that very fast pace. By doing this, I was able to improve in terms of the speed at which I now weave. I learnt that to weave fast, the strap that links the heddle to the treadles should be kept shorter. If the strap is kept long it delays the weaver. -- Atta Sarfo, a junior weaver</p> <p>I have also learnt how to fix warp and heddles breaks by..... observing other weavers do it. --Nana Nipa, a novice weaver</p> <p>For me, it was out of my numerous visits to the Kente Centre that made me learn. After school, I used to come around to observe the</p>			doing	

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>weavers weave. It was out of that I learnt the weaving. I learnt the patterns making from observing my master weaver do it. In all cases, he does it first for me to observe. --Oti Boateng, a junior weaver</p> <p>Certainly, though I am a master weaver, it was here that I learnt how to set up patterns on the warp. I mean the double weave technique where warp yarns are selectively raised and lowered and tie up to set the patterns. This type of double weave is new here. I learnt this technique of pattern set-up from some junior weavers; they introduced it here. Many of the master weavers learnt this technique of pattern set-up by observing the junior weavers do it. I learnt the trick of setting up patterns on the warp from some of the junior weavers here. -- Kwaku Marfo, a master weaver</p> <p>I must say that I have surprisingly learnt something new from my apprentice. I was surprised at how he could wind yarns firmly on the bobbin. So I observe him do it one time and got the trick. --Kwaku Marfo, a master weaver</p>				
19	Opportunity to practice and gain experience	After some time, I would allow the novice to try all that I have been showing him.....; the winding of yarns, warp preparation, and passing of yarns in the	Opportunity to practice			

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>heddles and the reed. -- Kankam Yeboah, a master weaver</p> <p>I used to sit around and observe him as he wove Kente fabric. After observing him for some time, he gave me the chance to sit on his loom to practise what I had been observing. He always stood beside me..... He showed me how to reverse the weave anytime he realised that I made a mistake. The chance he gave me to sit on the loom to practice what I have learnt from observing him helped me to gain experience to weave Kente properly. --Kwadwo Afriyie, a junior weaver</p> <p>I remember that I pleaded with one weaver to allow me to help him with the winding of yarns on the bobbins when I saw him doing it. Through the chance, he gave me I mastered how to use the bobbin winder to wind yarns on the bobbin. -- Owusu Adonten, a novice weaver</p>				
20	Opportunity to hear	Our conversations help a lot in imparting Kente-weaving knowledge to the novice weaver. The conversation paves way for the novice weaver to ask questions concerning things he does not understand for answers. The novice weaver is free to ask any master weaver about Kente weaving he does not understand. Our conversations here give the	Listening and hearing conversations		Information affordance through workplace conversations	

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>novice weavers more information about Kente weaving. --Nana Agyei, a master weaver</p> <p>Also, I learnt from other weavers' conversations on how to make Kente fabric beautiful when weaving. I overheard them say selecting short warp intervals or keeping the warp closer to one another when programming the patterns on the warp makes Kente fabric beautiful after weaving. I did it and I realised it was so. -- Kwadwo Afriyie, a junior weaver</p> <p>Master weavers most often comment and pass judgment on woven fabric. If a woven fabric is of quality or otherwise they would say it. For example, if a weaver does not beat up the fabric well to make it compact when weaving, he would be chastised and criticised by the master weavers for weaving inferior fabric. Such comments or judgments master weavers pass on a woven fabric help the novice weavers to know what constitutes a well-woven or quality fabric.-- Kwame Bonsu, a junior weaver</p> <p>Sometimes you may hear somebody say to a weaver on a loom to beat up the fabric at a particular point to get the compactness of the fabric ('ntoma wei dee, bɔ so ma no nye den'). In such</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>an instance if an apprentice hears this statement to beat up and sees the subsequent action thereof, he would learn how beating up using the reed is done to get desired compactness and weight of a woven Kente fabric. --Kwabena Amoako, a master weaver</p> <p>Through mingling with the weavers here, the novice weaver can know the name of the tools as they would be mentioned and used to produce Kente. --Oti Boateng, a junior weaver</p> <p>I noticed the names of the Kente fabrics and the embedded patterns are part of the daily conversations. These names are mentioned when weavers are conversing with clients and sometimes among themselves. Names of the various Kente fabric and patterns are also mentioned to tourists in the Exhibition room. I noticed that the conversation around the names of the fabric and patterns imparted me as it was through that I got to know some of the names of the fabrics and their embedded patterns. -- Observation</p>				
21	How to use tools	Yes, becoming a competent weaver has a relationship with the tools and equipment we use over here. The competent weaver must know how to control and use the tools. --Kankam Yeboah, a master weaver So the competent weaver	Tools usage knowledge	Learning to use tools		

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>should know how to practically use all the equipment and tools used in Kente weaving. --Kwabena Amoako, a master weaver</p> <p>The weaver has to know how to handle and throw the shuttle through the opening of the warp yarns. The weaver must know how to use his feet to press the treadles.....--Yaw Marfo, a master weaver</p> <p>We have a way to handle the shuttle.A Iso, you should know how to press down the treadles. - -Kwadwo Afriyie, a junior weaver</p> <p>The competent weaver must know the style by which to throw the shuttle through the warp. He should also know the style by which to press down the treadles.-- Nana Nipa, a novice weaver</p> <p>The shuttle is handled with the thumb on the shuttle bar while the index finger is placed on the end of the shuttle. Then the remaining fingers are placed under the shuttle bar. The fingers should not touch the bobbins in the shuttle so that the bobbin can wind around and release yarns when throwing the shuttle through the warp. If the shuttle is not handled this way, the bobbin would be impossible to wind up to release yarns through the warp. With your feet, you</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>have to learn how to match your feet and hands to move at an equal pace so that the shuttle can be thrown through the warp perfectly. The threads that hold the treadles should be in-between the big toes and next toes for both the right and left feet so that the treadles would not slip when they are being pressed down. --Kofi Mensah, a master weaver</p> <p>In weaving, the shuttle is thrown from right to left and vice versa. At the same time the weaver throws the shuttle from the right to the left, he has to exert effort on the right foot to push the right treadle down concurrently to open up the warp for the shuttle to be thrown through to the left. Similarly, from the left to the right, the weaver has to exert pressure on the left foot to push the left treadle down concurrently to create an opening of the warp for the shuttle containing the weft yarn to pass through. To be able to throw the shuttle through the warp, the weaver has to know how to open up the warp through the use of the feet on the treadle. It is the same process we perform to weave patterns or make designs on the Kente fabric. When the shuttle is on the left the weaver uses his left foot to press the left treadle down to make a weave and vice versa when it is on the right. If the weaver uses his</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>left foot to press the left treadle down while the shuttle is on the right of the warp, it means that the weaver has committed an error and is reversing the weave. So when the shuttle is on the right of the warp and you press down the left treadle, it means you are reversing a weave. --Nana Agyei, a master weaver</p> <p>There is also a way to handle and use the swordstick to open up the warp for the set patterns. The wrist is twisted backward like gasing up a motorcycle to open up the warp for the weft. One student from the university came to weave. He claimed that he was a competent weaver, yet he did not know how to handle and twist the wrist to open up the warp with the swordstick. He did it the opposite way; he twisted his wrist forward instead of backward to open up the warp. After many attempts, he failed to open up the warp as the swordstick kept dropping back. --Owusu Adonten, a novice weaver</p> <p>Many novice weavers do not know how to handle the reed. No matter what, when you are learning to weave, you would likely handle the reed from the top. The reed is handled from the side if the weaver wants to weave faster. Here, the weavers handle the reed from the side. Until I came here and</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>learnt from the other weavers, I used to handle the reed from the top. I have learnt that it is better to handle the reed from the side than from the top.-- Agyare Ansukun, a junior weaver</p>				
22	Features for determining the quality of a woven fabric	<p>Regardless of the number of years spent in weaving, the finishing of the fabric tells it all as to whether the maker is a master or a novice. Fabrics woven by most novices are fluffy, as they do not trim the fabric after weaving. Also, the fabrics woven by novices have frayed selvage ('atwuntwum'). --Kwaku Duodu, a master weaver</p> <p>I can tell from a fabric whether it was woven well or not. Though it depends on the type of fabric or the embedded patterns, when the surface of the fabric is smooth it means it was woven well; if the surface of the fabric is rough, it means it was not woven well. If the surface of the fabric is smooth it means the weaver beat up the fabric well when weaving, but if it is rough, it means the weaver did not beat up the fabric well. When pieces of yarn appear on the surface of the fabric, it means that it is rough. -- Atta Sarfo, a junior weaver</p> <p>A competent weaver can determine from the look and feel of Kente fabric and tell if it is lower quality or not. For the look, for example,</p>	Information sensing	Understanding cues		

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>when there are broken ends (Efoo) in the woven fabric, it shows that the fabric is lower quality and that the weaver could be a novice. The broken ends (Efoo) occur as a result of warp breaks.For example, if there is a heddle break, and it is not fixed, it would cause a defect called a float. This is where the weft yarn does not interlace the specific warp yarn for which the ‘eyes’ of the heddle have been damaged thereby causing the warp yarn to appear and hang on the woven fabric. So seeing some of the warp yarns appearing and hanging on the woven fabric attest it is of lower quality.For the feel, you can handle the fabric and feel it to determine if it has been woven properly. For instance, if it is heavier, it means the fabric was beaten up and compactly woven. It, therefore, suggests the fabric is of high quality. If the fabric is beaten up, it becomes compact and heavier. If it is light, it means the fabric was not compactly woven and that the weaver is a novice and the fabric is low in quality.- -Agyare Ansukun, a junior weaver</p> <p>I can look at Kente fabric and tell if the maker is competent or a novice. When I hold the Kente fabric, I can tell from the weight of the Kente whether it is quality or not. The</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>quality of the Kente fabric tells you whether the weaver is competent or not. If Kente fabric is heavier and compact it means that the Kente has been woven well. If the Kente fabric is light and easily bendable, it means that the Kente fabric is not compact and that it has not been woven well. The Kente fabric becomes compact when it is beaten up well with the reed during weaving. However, some master weavers intentionally do this to dupe their customers. --Kwadwo Afriyie, a junior weaver</p>				
23	Features for determining the type of yarns	<p>The cotton yarn is harder than the rayon. --Kankam Yeboah, a master weaver</p> <p>.....Also, rayon yarn is softer and easier to tear apart as compared to cotton. To identify which is which, we take a single yarn to tear it apart. If it is torn with very little effort then that yarn is rayon. However, if the yarn is a little hard to tear apart, then that yarn is cotton. --Kwabena Amoako, a master weaver</p>				
24	Features for determining the type of fabric/patterns	<p>The patterns layout signals the name of the Kente fabric. Every Kente fabric has different patterns. -- Kwabena Apam, a novice weaver.</p> <p>I observed that the Kente fabrics are identified by the embedded patterns. For example I observed that the Fatia fata Nkrumah fabric is embedded with the following five patterns</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>namely:</p> <ul style="list-style-type: none"> • Babadua pattern: It is a square-like shape with six horizontal or vertical partitions with different colours. The colours include black, green, red, and yellow in a square-like shape. • Apremu pattern: It is a staircases-like shape at the four sides in a rectangular shape on the fabric • Rotoa pattern: It is like the Akyem pattern with broken vertical lines • Nkyimkyim pattern: This is a pattern with vertical zigzag shapes running through the fabric. • Npoankron pattern: This is a pattern with two square-shape lines across each other diagonally to the four angular corners within a square or rectangular shape. <p>--</p> <p>Observation</p> <p>I observed that different Kente fabrics may have some common patterns in them. However, there is always a cue to identify one Kente fabric from the other. This cue could be the presence or absence of one or more patterns. Typical</p>				

No.	Final codes	Supporting quotes	Category	Themes	Sub-theme(s)	Sub-theme(s)
		<p>examples of such fabrics are the Fatia fata Nkrumah fabric and the Wo sin wo yonko a wotaa wo fabric. In these two fabrics I observed that the Wo sin wo yonko a wotaa wo fabric has four patterns of which three are found in the Fatia fata Nkrumah fabric. These three patterns are the Babadua, Rotoa and Nkyimkyim. The fourth pattern in the Wo sin wo yonko a wotaa wo fabric which is not found in the Fatia fata Nkrumah fabric is the Pudio pattern. The Pudio pattern is of a spider's web shape.-- Observation</p>				

APPENDIX 4: Ethical clearance Certificate



COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

23 April 2021

Dear Franklin Gyamfi Agyemang

Decision:
Ethics Approval from 23 April 2021
to 23 April 2026

NHREC Registration # :
Rec-240816-052
CREC Reference # :
67124496_CREC_CHS_2021

Researcher(s): Name: Franklin Gyamfi Agyemang
Contact details: 67124496@mylife.unisa.ac.za
Supervisor(s): Name: N Wessels
Contact details: wessen@unisa.ac.za

Title: *Knowing the fabric-weaving landscape: Information literacy practice of the Bonwire Kente Centre weavers*

Degree Purpose: PhD

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval is granted for five year.

The *Low risk application* was reviewed by College of Human Sciences Research Ethics Committee, in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.



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5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date (23 April 2026). Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.


Note:

The reference number 67124496_CREC_CHS_2021 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Yours sincerely,

Signature : 

Prof. Ilse Ferns
CHS Ethics Chairperson
Email: fernsi@unisa.ac.za
Tel: (012) 429 8210

Signature : PP 

Prof K. Masemola
Exécutive Dean : CHS
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APPENDIX 5A: Adults’s informed consent to participate in this study

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunities to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the interview and observation.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname..... (please print)

Participant Signature.....Date.....

Researcher’s Name & Surname.....(please print)

Researcher’s signature.....Date.....

APPENDIX 5B: Parent/guardian informed consent for minors

I, _____ (participant name), confirm that the person asking my consent to allow my child (ward) to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to allow my child (ward) to participate in the study.

I understand that participation is voluntary and that I am free to withdraw my child (ward) at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my child's (ward's) participation will be kept confidential unless otherwise specified.

I agree to the recording of the interview and observation.

I have received a signed copy of the informed consent agreement.

Parent/Guardian Name & Surname.....(please print)

Parent/Guardian Signature.....Date.....

Researcher's Name & Surname.....please print)

Researcher's signature.....Date.....

APPENDIX 6: Participant information sheet

3rd March, 2021

**KNOWING THE FABRIC-WEAVING LANDSCAPE: INFORMATION LITERACY
PRACTICE OF THE BONWIRE KENTE CENTRE WEAVERS**

Dear Prospective Participant,

***KNOWING THE FABRIC-WEAVING LANDSCAPE: INFORMATION LITERACY
PRACTICE OF THE BONWIRE KENTE CENTRE WEAVERS***

My name is FRANKLIN GYAMFI AGYEMANG and I am doing research with DR. NICOLINE WESSELS, a senior lecturer in the Department of INFORMATION SCIENCE towards a PHD at the University of South Africa. We are inviting you to participate in a study entitled **“KNOWING THE FABRIC-WEAVING LANDSCAPE: INFORMATION LITERACY PRACTICE OF THE BONWIRE KENTE CENTRE WEAVERS”**

WHAT IS THE PURPOSE OF THE STUDY?

I am conducting this research to find out how learning in the weaving landscape is undertaken. The study seeks to find out how people develop competence, and how the competence development is enacted by information literacy practice in Kente-weaving landscape.

WHY AM I BEING INVITED TO PARTICIPATE?

You being invited to participate in this study because the study is on your practice (the work you do). You have been identified as belonging to one of the levels (groups) of weavers in the Kente-weaving landscape.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

By agreeing to participate in this study, you are given approval to be interviewed (audio-recorded) and observed. The interview will not take less than one hour. You can have a look at the interview questions to inform your decision as to whether to participate in this study or not. With regard to the observation, you will be observed at any time during the time of data collection.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Yes, your participation in this study is voluntary. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You can withdraw from this study any time you wish without having to give a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

There is no financial reward for participating in this study. However, the weavers as a group stand to benefit as it seeks to bring to the fore how learning in this traditional craft is undertaken to become information literate in the Kente-weaving landscape.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

If there are any negative consequences for participation, they will be few. This is because this research has been carefully designed and approved by the University of South Africa Ethics Committee (please see the approval letter). The possible negative consequence of participation in this study will be the feeling of discomfort that may result from the interview questions to give an account of your personal experiences as far as learning in the Kente-weaving landscape is concerned. As indicated earlier, you can withdraw from participating in this study at any time.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

Apart from the researcher, no one will know about your participation in this study. The data collection (interview and observation) and analysis will be done by the researcher. Following this, excerpts of quotes that will be used in the analysis of this study and future publications resulting from this study will be attributed to pseudonyms. By this, your identity will be hidden.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for five years in a locked cupboard/filing cabinet in the researcher's room for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable.

After five years, hard copies of your answers will be burnt. The electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software programme.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There will be no payment or reward for your participation in this study. However, the researcher will pay for any material usage and damage in the field in relation to his participation in the practices of the Kente-weaving landscape.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact FRANKLIN GYAMFI AGYEMANG on 0244583132. The findings are accessible for six months after graduation. Should you require any further information or want to contact the researcher about any aspect of this study, please contact the researcher on email: 67124496@mylife.unisa.ac.za or by phone number 0244583132

Should you have concerns about the way in which the research has been conducted, you may contact my supervisor by email: wessen@unisa.ac.za

Thank you for taking the time to read this information sheet and for participating in this study.

Thank you.

FRANKLIN GYAMFI AGYEMANG