Chapter 5
Personalised Measurement Design:
Implementing Industry 5.0

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ABSTRACT

The digital economy is now upon us, providing new customer-centric business models fostered during the digital transformation of Industry 5.0. Social networks, mobile applications, data analytics, cloud dependency, and the (IoT) Internet of Things were just vehicles for change. Swept up in this rush for automated business operations is awareness of balancing network complexity and personalizing information measurement systems. This chapter takes a five-pronged approach to situate where the concept of personalized measurement design fits within Industry 5.0. The first section explains how digital transformation has merged multidisciplinary specializations. The second section deals with the preparations for personalized measurement design to enhance the flexibility of online assessment practice. The third section shows how social science knowledge society opens an Industry 5.0 pathway to achieve fully automated human-computer interaction (HCI). The fourth section is about designing flexible online assessments. The final section discusses the next generation of learning analytics.

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INTRODUCTION

Implementing the design of personalized measurement of human-computer interaction (HCI) for Industry 5.0 involves committed rich data examination by experts aware of how big data is transforming business and society (McKay & Mohamad, 2018). Passing from Industry 4.0 towards 5.0 has meant massive disruption for commerce (Marr, 2016). For instance: this sustainable awareness through improved wireless communications (Alsharif & Nordin, 2017) and finding data behaviour patterns amongst the data messiness (Melendez, 2015; Schöch, 2013). However, few authors agree on what constitutes big data, depending on the philosophical stance taken (McKay & Mohamad, 2018)—keeping such data archived for appropriate retrieval poses major global cyber security issues and crosses ethical boundaries.

This chapter discusses five topics to illustrate where the concept of personalized measurement design fits within Industry 5.0. The first section explains how digital transformation has merged multi-disciplinary specializations, such as the community-rich society created by Derek Powazek (2002), concerning his ideas for artful design for connecting real people in virtual places that are now commonplace. The second section discusses practical preparations for personalizing measurement design to eliminate otherwise subjective decisions leading to incorrect and poor-quality outcomes. The third section shows how the social science knowledge society opens an Industry 5.0 pathway to fully automated IoT human-computer interaction (HCI) connectivity (McKay, 2008). Then the fourth section is about designing flexible online assessment practices, while the final section discusses the next generation of learning analytics.

Digital Transformation Merges Multi-Disciplinary Specializations

Digital transformation is not about technology – it's about change. And it's not a matter of if but a question of when and how. (Weill & Woerner, 2018) p:1

Designing for a community involves three rules (Powazek, 2002): Rule-1: tie content directly to the community and connect the homepages of the content tree and the community tree (Figure 1), where each information system level is interlinked, for instance: through an interlinked tree by connecting the dots (see red line).

Rule-2: bury the Post Button (Figure 2), whereby *"there is a proportional relationship to the distance that the post button is from the front door of the site and the quality of conversation on the site"* (Powazek 2002 p:53). The larger the distance, the better the result is.