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Social media facilitates custom-made apparel design decisions: The future for business smart fashion designers

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Abstract

Fashion design entrepreneurs (FDEs) are compelled to embrace digitalisation to create a competitive advantage and provide the Web 2.0 (participative and social web) smart customer with the service they require. The purpose of this research was to determine how social media facilitates custom-made apparel design decisions in the FDE context. This study sets out to apply the thirdgeneration activity theory to show the role social media plays in the activity system's result between a customer and FDE during the design process. Qualitative data from three independent exploratory studies conducted in Gauteng, South Africa, were used. The study participants for each study were purposefully selected, either as customers of custom-made apparel designers or custom-made apparel designers of SMEs. Content analysis of social media-related extracts from transcribed data was used to identify the technological and semiotic elements of the mediating activities within the customer (subject) and designer (subject) activity systems. Findings suggest that social media as technology, for both activity systems, acts as an inspirational, marketing, distance bridging and design-process tool through the semiotic use of messaging and pictures. Through social media technology, comments and pictures facilitate the semiotic use of social media in each of these tools. Between the two activity systems, the design process facilitates the introduction, design development, or agreement and design progress or completion phases of the process, using comments and pictures as semiotic elements of communication. Through mobile phones, design communication between the activity systems is supported within the fashion community considering social media policy and regulations. Social media is a valuable tool through which the customer and FDE can engage in the design process in an emerging context. The success of the FDE may be reliant on the use of social media and better advocacy of the entrepreneurial business context within design education. FDEs need to understand the importance of the dialectics between creative design and creative business management to ensure the future of fashion designers in an emerging context such as South Africa.

Keywords: Activity theory, emerging economy, entrepreneurship, fashion design, fashion design education, social media

Introduction

Social media offers fashion design entrepreneurs (FDEs) the opportunity to reach new and existing customers (Çiçek, 2018). As consumers have become empowered through smartphones (Duggal & Jain, 2019), entrepreneurs can capitalise on social media in innovative ways to initiate and manage a business (Çiçek, 2018; Khajeheian, 2013). Social media platforms have become an important part of marketing for businesses of all sizes (Hudson, 2020). But Ngoasong (2018) and Jagongo and Kinyua (2013) found very few entrepreneurs in emerging economies using social media optimally. Social media is useful in customer communication (Camilleri, 2019), marketing initiatives (Kim, 2021; Hudson, 2020), crowdfunding opportunities (Olanrewaju, et al., 2020) and assisting women entrepreneurs with networking to grow their business in an emerging context (Cesaroni, Demartini & Paoloni, 2017). Although creativity and innovativeness are important skills for an entrepreneur (Chandra, Tomitsch & Large, 2020), the value of utilising innovative digital technologies, such as social media, may still be lacking and more so within the FDE context. Little research has been conducted on the role social media plays in the design decisions between the customer and FDEs. The purpose of this study is, therefore, to determine how social media facilitates custom-made apparel design decisions in small fashion design entrepreneurial contexts and why FDEs should be aware of the value social media brings to a small entrepreneurial business context.

Literature

The role of design education in fashion design entrepreneurship

Increasing unemployment is challenging fashion design students (FDSs) to become FDEs (Lang & Liu, 2019), whereby they actively manage their business decisions (Meyer & Norman, 2020) with an entrepreneurial mindset (Fernandes, 2019). Including entrepreneurship in a fashion design curriculum is crucial in establishing students' entrepreneurial competency (Duggal & Jain, 2019; Hodges, et al., 2016) and preparing FDSs to start and manage their own fashion design businesses (Fernandes, 2019). To become an entrepreneur, an FDS must merge creative design processes with business practices (Ghajargar & Bardzell, 2019; Aakko & Niinimäki, 2018). Design education is not about entrepreneurship, although fashion design education institutions have the responsibility (Marniati & Witcjaksono, 2020) to provide opportunities for students to transition between being a creative person and starting a fashion design business (Mills, 2012). To become successful, an FDE requires the necessary knowledge, skills and abilities to manage and develop a fashion design business that can address and recognise current demands (Lang & Liu, 2019; Yu, Yuizono & Kim, 2019). Business and entrepreneurship modules are included in some international (Lang & Liu, 2019; Yezhova, Pashkevich & Manoilenko, 2018) and South African fashion design programmes. The concern is, however, whether design education has kept up with twenty-first-century demands (Meyer & Norman, 2020; Ozkaynak & Ust, 2012) brought about through social media.

Technological innovation in design education

Digital technology advancement is currently challenging fashion design education (Marniati & Wibawa, 2019), as it has become an integral part of the fashion industry (Sun & Zhao, 2018). Evolving into connecting individuals to industries has enabled the fashion industry to communicate with their customers (Ahmad, Salman & Ashiq, 2015; Halel, Ozuem & Lancaster, 2018). As fashion consumers are more digitally connected (Zhao, Davis & Copeland, 2018), FDEs are running a risk if they are not active on social media (Duggal & Jain, 2019; Bilal, Ahmed

& Shahzad, 2014). FDEs must reach their customers through the media that customers actively use (Indrupathi & Henari, 2012). Although much attention has been placed on social media as a marketing tool (Tripathi, 2019), its value as a communication tool should not be overlooked (Sehar, Ashraf & Azam, 2019) by fashion design education. Its value manifests as customer information sharing medium (Sultana, 2018), managed through social networking sites, for example, WhatsApp, Facebook and Instagram (Tripathi, 2019), offering FDEs the opportunity to communicate design decisions to the customer.

Theoretical perspective

Activity theory (AT), commonly known as cultural-historical activity theory (Batiibwe, 2019), is a theoretical framework for analysing and understanding human interaction and subsequent activities with technology as tools and artefacts (Hashim & Jones 2007). An activity system is a collective of activities undertaken by actors (Foot, 2014). The activity is linked to various actions with a specific purpose (Katsuhiro, 2006), thus reflecting on what people do (Gretschel, Ramugondo & Galvaan, 2015). Activities use tools to achieve a particular outcome (Sannino & Engeström, 2018). Activities represent six components of the activity system (diagram A in Figure 1). Three components (subject, object, and tools) represent the top structure of the activity system. The subject is the actions of people involved in the activity (Trust, 2017), the object is the purpose of the action towards solving a problem, and the tool is the mediating device (Hashim & Jones 2007) used by the subject to achieve the outcome, which is the physical or mental product of the activity system (Trust, 2017; Gretschel, Ramugondo & Galvaan, 2015; Foot, 2014; Koszalka & Wu, 2005). In the context of this study, social media platforms are the design communication tool, the object is the ordered custom-designed garment, and the subject is the customer who requires the garment. The bottom structure of the activity system includes the remaining three components (community, rule and division of labour), highlighting the influence of other factors on the outcome of the activity (Engeström 2001). The community of significant others includes people who have a common interest in the same object (Trust, 2017), such as social influencers. The relation between the subject and the community is mediated by the rule component (Foot, 2014) that regulates the subject's actions. Rules include explicit and implicit regulations, norms, conventions, and standards that constrain actions (Sannino & Engeström, 2018). Finally, the division of labour component indicates what is being done by whom towards the object (such as the designer or tailor). The reciprocal relationships between these components contribute to a better understanding of the activity system, resulting in the value of AT (Foot, 2014).

Engeström's (2001) third-generation AT model introduces two interacting activity systems (Bakhurst, 2009), describing how one activity system can connect with another activity system through all the components (Gretschel, Ramugondo & Galvaan, 2015). In this instance, two activity systems engage through Object 1 (ordered custom-made garment). The customer's activity system, labelled A in Figure 1, moves to a collectively meaningful activity system in Object 2A (customer's ideas and design requirements). The second activity system (labelled C in Figure 1) is that of the FDE, from whom the customer commissions a custom-made garment. The designer brings another activity system to the collective engagement, resulting in Object 2C (designer's alternative ideas and recommendations). Object 3 (labelled B in Figure 1) is the shared and jointly constructed outcome (completed garment), resulting in a collaboratively designed outfit (Engeström 2001). The interaction between the two activity systems (A and C in Figure 1) results in the designed garment, as outcome/Object 3 (B in Figure 1). It is proposed that the activity systems are mediated through social media as a design communication tool, used by both activity systems to generate ideas, make design decisions, and conclude the

design activity. The strength of AT is thus the focus on the relations and activities between actors (subjects) and the technological artefacts (Kaptelinin, Kuutti & Bannon 1995).

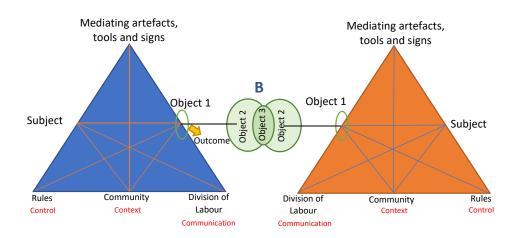


Figure 1: Third generation AT (Engeström (2001); Sharples, Taylor and Vavoula (2005), amended)

Drawing on Sharples, Taylor and Vavoula's (2005) reworking of Engeström's (2001) model, activity is separated into the semiotic layer (include the actions to promote an objective) and the technological layer (engagement with technology) added to each of the AT components. Sharples, Taylor and Vavoula (2005) suggest that these layers are not separate but fused to form a broader category of technology, which acts as a tool to assist people in addressing problems in context and to come to a new understanding. Sharples, Taylor and Vavoula (2005) further substitute Engeström's (2001) rule component with control (rights and permission afforded by the technology), community with context (access to mobile devices), and division of labour with communication (a form of conversation and the way conversation space is shared between parties), to show the dialectical relationship and interactions between technology and semiotics, indicated in red in Figure 1.

Methodology

Data from three independent exploratory-descriptive qualitative (EDQ) studies, conducted in Gauteng, South Africa, were used for this research. EDQ studies aim to explore and describe the experiences of participants (Hunter, McCallum & Howes, 2018) through their thoughts and expressions (Gundumogula, 2020) to gain insight into the phenomenon (Jain, 2021). Study 1 was a case study conducted through personal interviews with 13 custom-made apparel designers within an incubation hub context. Study 2 consisted of 11 mini focus group discussions held with 31 customers of designers of custom-made apparel. Neither study 1 nor 2 specifically elicited data on social media usage, but it emerged from the participant conversations. Study 3 determined, in more depth, custom-made apparel customers' social media use through eight online personal interviews with customers of custom-made designers. To ensure relevant information is provided for each of the studies, participants were purposefully selected according to set inclusion criteria (Andrade, 2021; Luciani, et al., 2019).

Synchronous face-to-face interviews, eliciting personalised engagement (Jain, 2021), were used for studies 1 (personal interviews) and 2 (mini focus groups). Study 3 was conducted in 2020 by using convenient real-time synchronous online interviews while geographically separate (Krouwel, Jolly & Greenfield, 2019; Gill & Baillie, 2018). Semi-structured interviews,

allowing for probing questions to elicit more detail (Lune & Berg, 2017), were applied across all three studies. In all these studies, data saturation was reached through thick (quantity) and rich (quality) data (Fusch & Ness, 2015). Conceptual depth resulted in an understanding of and insight into the data (Nelson, 2017), and no new useful information relative to the study objectives (Quest, Namey & Chen, 2020) were identified.

Qualitative content analysis was performed inductively on all interview and focus group transcriptions to allow for an interpretative and meaning-orientated approach to the analysis (Morgan, 2019). This analysis was performed on social media-related extracts from the transcribed data in which the technological and semiotic elements of the activities were identified. Trustworthiness criteria were applied as follows to ensure the quality of the research (Lincoln & Guba 1986); dependability was addressed through a logical, traceable and documented research process (Moon, et al., 2016); credibility was ensured through pilot testing of the interview guide and seasoned researchers conducting the interviews (Forero, et al., 2018); transferability was acquired through the detailed description of the research methodology adopted in each study and confirmability through keeping an audit trail (Forero, et al., 2018).

Before the studies commenced, ethical clearance was obtained from the Health Research Ethics Committee at the College of Agriculture and Environmental Sciences (Ethics numbers: 2016/CAES/005; 2018/CAES/144).

Findings and discussion

Social media is used for four purposes between customers and FDE activity systems: as a distance-bridging tool, an inspirational tool, a marketing tool, and a design-process tool.

Social media as a distance-bridging tool is used to shorten the distance between the customer and the FDE: As "the designer that I use is based in Lesotho, social media is the easiest way for me to communicate with her". The convenience of social media is attractive to customers: It is a "convenient mode between myself and her", as "it's easier for us to communicate via social media than for me to be travelling to Pretoria". FDEs use social media on their mobile phones to facilitate the sourcing of raw materials: It enables them to send pictures and confirm prices and suitability of available fabrics, as they can "choose fabric, go to the shop and shoot, WhatsApp [you and] tell you what I want". They can "send the pictures of [fabrics and say], this one looks very nice and costs this much. And [the client] give you a go-ahead on which one they would want". In this way, the customer has an input in the selection of fabric, without being in the fabric shop.

The social media used as inspirational tools are predominantly Facebook and WhatsApp. "When I see a design that I like, I will ", or I "even see it on social media" or "take pictures from social media" or "look at Pinterest for ideas" to use in future designs. In this instance, pictures form the semiotics during the use of social media. FDEs confirmed that they use their mobile phones to access new ideas and inspiration: "I also go to the internet to look at patterns ... No, I'm using my phone ... I google", and "...we are aware of trends ... I think Instagram is it now ... I like Pinterest as well". Clients also communicate with their designers through Facebook ("I will send some of the requests through ... Facebook to her"), WhatsApp, which "is the most easily accessible one", or Instagram.

Social media as a marketing tool is used by FDEs who have a Facebook presence. Prospective customers can see "them on Facebook, ... it's an ongoing thing", as customers recognise that "designers use (Facebook) to promote their clothing". FDEs confirmed that, "Even on

Facebook, ... ja, I do put my things" and "We do have a Facebook page". Customers also noticed that some designers post completed designs on Facebook "just to see the interest or the likes or dislikes of other people" as an indication of what the designer can create. This confirms Hudson's (2020) view that social media is the new "word-of-mouth". In these instances, the semiotics emanate through design pictures. Social media is not only attracting customers who look for "some of the designers ... on Facebook", but it is also used to find and follow fashion designers "for ideas", as customers prefer to "check online" and go "with those who are online now". Semiotics become linguistically effective as customers follow FDEs by "notice(ing) when someone recommends someone; I check the comments", because "if people have positive comments about them, then I use them ... when people say they ask them to design something, they actually gave them the good results, that's what I look for". An intricate evaluation of the Facebook designer profile is made by some customers, who "don't just go with any designer ... I check the style" and "actually, check the background for them (sic) ... Are they doing modern things, are they doing things that can suit me". Through pictures, the semiotics assists in deciding on which designer to use.

Social media as a design-process tool is used during three different design phases in the customer and FDE activity systems: the introductory phase, the design development and agreement phase, and the design progress and completion phase.

During the *introductory phase*, the design request is initiated by the customer: "when you have an idea that you want something", social media is used "to start the conversation". This includes "ask(ing) them if they're available ... are they going to be able to do it within the specific time" and "how long is it going to take for her to complete what I want", which then leads to the customer and FDE "agree(ing)" over social media, as "all of that happens on social media". However, introductory semiotics not only emerge through language but also through pictures, "when I see a design that I like...I will take the design and start a conversation with my designer, to ask if she'd be able to make it". Therefore, the initial consultation to commission a custom-made garment is often facilitated through social media. FDEs may also initiate this phase, using social media technology, in which case "the designer as well, will see something nice and say, would you like to have something like this". In both activity systems, the semiotic element emerges through language and pictures to start the design process.

Design development results from the introduction to which the FDE responds, through the use of social media, by "share(ing) ideas ... they think might work or might not work". Subsequently, customer's body measurements are confirmed by "send(ing) the measurements on WhatApp" or, where measurements are on record, "you can just send your pictures like a facing front, back, sideways and ... send those pictures through the WhatsApp", or "measure that [the longer length of the garment] and send it". The semiotics of measurement includes pictures or language.

The customer and FDE continue developing the exactness of the design through social media by "deliberating ... confirming the fabric ... maybe sending a design sketch, or maybe sharing a pic with him that I want him to do in a certain way". Alternatives are communicated between the customer and the FDE through social media. FDEs state that they "just give advice" and "try and give suggestions", for example, "how about taking this piece and adding this one ... alternating this, with this", or point out the effect of the design selection to the customer, for example, "that lace is too soft for that kind of material ... it will overpower the dress", or "you want this kind of a dress ... it will suit [you], if we do it like this". During this phase, material selection decisions, including the price of the material, are made; the FDE will "use WhatsApp to show me with a video [which] materials are available. This is the one that I'm getting". Or "she will take pictures of several colours ... and then she will send [it] through WhatsApp". The client will then ask, "Tell me which one do you like most". And, when a decision is made,

"Send the price of the material". The design development process reaches finalisation when the final design is "share(d) for me to approve or disapprove", followed by "invoice(ing) you via social media ... before they create the [design]". Then "the paying of deposits and sending the proof of payment through social media" commences. Therefore, the semiotics of this phase is an interplay of decisions taken through pictures and language to finalise the design between the customer and the FDE.

During the <u>design progress and completion phase</u>, the FDEs use social media to communicate progress by messaging: "Just wanted to update you on how far she is". And "Send me pictures to see" or "This is where I'm at the moment" or "Immediately after she does something, she will say OK, this [is] what I've done, see how it looks like ... Are you happy with what you see?" Design progress may also indicate that "I [the designer] am not sure that the dress would be ready by Friday". or "The time for fitting "Garment fitting and collection may be the only physical contact taking place during the design activities, as "collection obviously has to be in person". Regular fittings may not be necessary, as "I don't have to go and fit ... I just go knowing that it will be perfect" because "they [the designer] normally write the measurements down, and they keep them". Some FDEs do not require physical fit and can judge fit through pictures of the customer, thereby determining "whether she can stick to the measurement that she has or maybe to decrease or increase the measurements". Semiotic engagement results from language or pictures sent between the customer and FDE.

Discussion

Based on the findings and the proposed activity system illustrated in Figure 1, we have constructed a two-way activity system to describe the use of social media as a design communication tool between the customer and the FDE. The proposed activity system for each subject suggests that social media platforms play a role in the configuration, as it acts as a distance bridging, inspirational, marketing and design-process tool during the engagement between the customer and FDEs (Figure 2). Social media mediates the design activities between the two systems, for the custom-made object becomes the outcome. During the design process, design ideas and alternatives are brought from both systems by each subject (FDE and customer) to be considered for the final design. Through social media mediation, the designed object or outcome (Object 3B in Figure 2) is achieved between the two collaborating activity systems, using language and pictures as semiotics.

As all components of the AT are interlinked, social media further mediates communication within both activity systems through comments on posts and picture sharing as semiotics between customers and the FDE continue. Context is achieved through mobile phone interactions between the customer and the FDE, including engagements with the fashion design community, accessed through Facebook comments, which depict the semiotics of the context and authenticates the designer, and control is the technological interaction between both systems that are governed by social media rules about the platform (WhatsApp, Facebook, Instagram) that are used to access comments and posts by the designers which include social rules at a semiotic level. Social media, thus, is a core tool within the activity systems of both customer and FDE through which all AT components are interlinked.

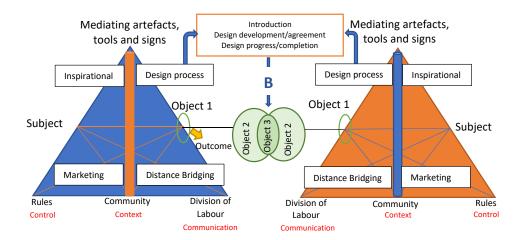


Figure 2: Proposed AT of customer and FDE through social media as design communication tool

Conclusion

The purpose of this research was to determine how social media facilitates custom-made apparel design decisions in the FDE context. The evidence suggests that, although social media is usually considered a marketing tool, FDEs, in an emerging market context, use this tool to communicate design ideas and alternatives, fulfilling an important role across all components of the activity system for both customers and FDEs. It is therefore important that the influence of social media on the design process should not be overlooked in a design education curriculum, as it can contribute towards efficient customer service for start-up entrepreneurs in an emerging economy. This research has contributed through AT to show how social media is used and how the design process is managed through social media. Further research is needed to understand the effect of social media fully on fashion designer profiles and its role in establishing South African fashion designers in an emerging context.

References

- Aakko, M & Niinimäki, K 2018, 'Fashion designers as entrepreneurs: Challenges and advantages of micro-size companies', *Journal of Design, Creative Process & the Fashion Industry*, vol. 10, no. 3, pp. 354-380.
- Ahmad, N, Salman, A & Ashiq, R 2015, 'The impact of social media on the fashion industry: Empirical investigation from Karachiites', *Journal of Resources Development and Management*, vol. 7, pp. 1-7.
- Andrade, C 2021, 'The inconvenient truth about convenience and purpose samples', *Indian Journal of Psychological Medicine*, vol. 43, no. 1, pp. 86-88.
- Bakhurst, D 2009, 'Reflections on activity theory', *Educational Review*, vol. 61, no. 2, pp. 197-210.
- Batiibwe, MSK 2019, 'Using cultural historical activity theory to understand how emerging technologies can mediate teaching and learning in a mathematics classroom: A review of literature', Research and Practice in Technology Enhanced Learning, vol. 14, no. 12, pp. 1-20.

- Bilal, G, Ahmed, MA & Shahzad, MN 2014, 'Role of social media and social networks in consumer decision making: A case of the garment sector', *International Journal of Multidisciplinary Sciences and Engineering*, vol. 5, no. 3, pp. 1–9.
- Camilleri, MA 2019, 'The SMEs' technology acceptance of digital media for stakeholder engagement', *Journal of Small Business and Enterprise Development*, vol. 26, no. 4, pp. 504-521.
- Cesaroni, FM, Demartini, P & Paoloni, P 2017, 'Women in business and social media: Implications for female entrepreneurship in emerging countries', *African Journal of Business Management*, vol. 11, no. 14, pp. 316–326.
- Chandra, P, Tomitsch, M & Large, M 2020, 'Innovation education programs: A review of definitions, pedagogy, frameworks and evaluation measures', *European Journal of Innovation Management*, doi: 10.1108/EJIM-02-2020-0043.
- Çİçek, ÜB 2018, 'Social media entrepreneurship', *Journal of Social Sciences*, vol. 2, no. 1, pp. 10–17.
- Duggal, G & Jain, LK 2019, 'Challenges and issues faced by entrepreneurs in fashion industry', *Cosmos: An International Journal of Management*, vol. 8, no. 2, pp. 5-8.
- Engeström, Y 2001, 'Expansive learning at work: Toward an activity theoretical reconceptualization', *Journal of Education and Work*, vol. 14, no. 1, pp. 133-156.
- Fernandes, CE 2019, 'Fashion design entrepreneurship: Skills and solutions to create a fashion business', *Journal of Textile Science & Fashion Technology*, vol. 3, no. 1, pp. 1–3.
- Foot, KA 2014, 'Cultural-historical activity theory: Exploring a theory to inform practice and research', *Journal of Human Behavior in the Social Environment*, vol. 24, no. 3, pp. 329–347.
- Forero, R, Nahidi, S, & Aboagye-Sarfo, P et al. 2018, 'Application of four-dimension criteria to assess rigour of qualitative research in emergency medicine', *BMC Health Services Research*, vol. 18, no. 120, doi: 10.1186/s12913-018-2915-2.
- Fusch, PA & Ness, LR 2015, 'Are we there yet? Data saturation in qualitative research', *The Qualitative Report*, vol. 20, no. 9, pp. 1408–1416.
- Ghajargar, M & Bardzell, J 2019, 'What design education tells us about design theory: A pedagogical genealogy', *Digital Creativity*, vol. 30, no. 4, pp. 277-299.
- Gill, P & Baillie, J 2018, 'Interviews and focus groups in qualitative research: An update for the digital age', *British Dental Journal*, vol. 225, no. 7, pp. 668–672.
- Gretschel, P, Ramugondo, E & Galvaan, R 2015, 'An introduction to Cultural Historical Activity Theory as a theoretical lens for understanding how occupational therapists design interventions for persons living in low-income conditions in South Africa', South African Journal of Occupational Therapy, vol. 45, no. 1, doi: 10.17159/2310-3833/2015/v45no1a9.
- Gundumogula, M 2020, 'Importance of focus groups in qualitative research', *International Journal of Humanities and Social Science*, vol. 8, no. 11, pp. 299-302.
- Halel, G, Ozuem, W & Lancaster, G 2018, 'Social media brand perceptions of millennials', International Journal of Retail and Distribution Management, vol. 46, no. 10, pp. 977-998.
- Hashim, NH & Jones, ML 2007, 'Activity theory: A framework for qualitative analysis', https://ro.uow.edu.au/commpapers/408.
- Hodges, N, Watchravesringkan, K et al. 2016, 'An exploration of success factors from the perspective of global apparel entrepreneurs and small business owners: Implications for

- apparel programmes in higher education', *International Journal of Fashion Design, Technology and Education*, vol. 9, no. 1, pp. 71-81.
- Hudson, M 2020, 'What is social media? Definitions and examples of social media', https://www.thebalancesmb.com/what-is-social-media-2890301, viewed 17 May 2021.
- Hunter, DJ, McCallum, J & Howes, D 2018, 'Defining exploratory-descriptive qualitative (EDQ) research and considering its application to healthcare', in *Proceedings of Worldwide Nursing Conference 2018*, Worldwide Nursing Conference 2018
- Indrupati, J & Henari, T 2012, 'Entrepreneurial success, using online social networking: Evaluation', *Education, Business and Society: Contemporary Middle Eastern Issues*, vol. 5, no. 1, pp. 47-62.
- Jagongo, A & Kinyua, C 2013, 'The social media and entrepreneurship growth', *International Journal of Humanities and Social Science*, vol. 3, no. 10, pp. 213 227.
- Jain, N 2021, 'Survey versus interviews: Comparing data collection tools for exploratory research', *The Qualitative Report*, vol. 26, no. 2, pp. 541 554.
- Kaptelinin V, Kuutti K, Bannon L 1995, 'Activity theory: Basic concepts and applications', in Blumenthal B, Gornostaev J, Unger C (eds), *Human-Computer Interaction*, EWHCI 1995, Lecture Notes in Computer Science, vol. 1015. Springer, Berlin, Heidelberg, doi: 10.1007/3-540-60614-9_14.
- Katsuhiro, Y 2006, 'Activity theory and the transformation of pedagogic practice', Educational Studies in Japan: International Yearbook, no. 1, pp. 77–90.
- Khajeheian, D 2013, 'New venture creation in social media platform; towards a framework for media entrepreneurship', in M Friedrichsen & Mühl-Benninghaus, W (eds), Handbook of social media management: value chain and business models in changing media markets, Springer Publishing Company, New York, doi: 10.1007/978-3-642-28897-5
- Kim, S 2021, 'Mapping social media analytics for small business: A case study of business analytics', *International Journal of Fashion Design, Technology and Education*, doi: 10.1080/17543266.2021.1915392.
- Koszalk, TA & Wu, C-P 2005, 'A cultural historical activity theory (CHAT) analysis of technology integration: Case study of two teachers', Association for Educational Communications and Technology Annual Meeting, pp. 492–502, https://eric.ed.gov/?id=ED485000.
- Krouwel, M, Jolly, K & Greenfield, S 2019, 'Comparing Skype (video calling) and in-person qualitative interview modes in a study of people with irritable bowel syndrome an exploratory comparative analysis', *BMC Medical Research methodology*, vol. 19, no. 219, doi: 10.1186/s12874-019-0867-9.
- Lang, C & Liu, C 2019, 'The entrepreneurial motivations, cognitive factors, and barriers to become a fashion entrepreneur: A direction to curriculum development for fashion entrepreneurship education', *International Journal of Fashion Design, Technology and Education*, vol. 12, no. 2, pp. 235-246.
- Lincoln, YS & Guba, EG 1986, 'But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation, *New Directions for Program Evaluation*, vol. 30, pp. 73-84.
- Luciani, M, Campbell, K, Tschirhardt, H, Ausili, D & Jack, SM 2019, How to design a qualitative health research study', Part 1: Design and purposeful sampling considerations, *Professioni Infermieristiche*, vol. 72, no. 2, pp. 152–161.
- Lune, H & Berg, BL 2017, *Qualitative research methods for the social sciences,* 9th edn, Harlow, Pearson Education.

- Marniati, M & Wibawa, SC 2019, 'Analysis of the important role of competency of business enterprises in the industrial work practice in era 4.0', IOP *Conference Series: Materials Science and Engineering*, p. 830
- Marniati, M & Witcjaksono, A 2020, 'Curriculum implementation, entrepreneurship motivation, and fashion entrepreneurship case study of student learning outcomes in regular classes and entrepreneurship classes', *International Journal of Fashion Design*, *Technology and Education*, vol. 13, no. 3, pp. 317-324.
- Meyer, MW & Norman, D 2020, 'Changing design education for the 21st century', *Journal of Design, Economics, and Innovation* vol. 6, no. 1.
- Mills, CE 2012, 'Navigating the interface between design education and fashion business start-up', *Education + Training*, vol. 54 No. 8/9. Pp. 761–777.
- Moon, K, Brewer, TD, Januchowski-Hartley, SR, Adams, VM & Blackman, DA 2016, 'A guideline to improve qualitative social science publishing in ecology and conservation journals', *Ecology and Society*, vol. 21, no. 3, doi: /10.5751/ES-08663-210317.
- Morgan, DL 2019, Basic and advanced focus groups, Sage.
- Nelson, J 2017, 'Using conceptual depth criteria: Addressing the challenge of reaching saturation in qualitative research', *Qualitative Research*, vol. 17, no. 5, pp. 554–570.
- Ngoasong, MZ 2018, 'Digital entrepreneurship in a resource-scarce context, a focus on entrepreneurial digital competencies', *Journal of Small Business and Enterprise Development*, vol. 25, no. 3, pp. 483–500.
- Olanrewaju, A-S, Hossain, M, Whites, N & Mercieca, P 2020, 'Social media and entrepreneurship research: A literature review', *International Journal of Information Management*, vol. 50, pp. 90–110.
- Ozkaynak, MG & Ust, S 2012, 'New forms of design education', *Procedia Social and Behavioral Sciences*, vol. 51, pp. 140–143.
- Quest, G, Namey, E & Chen, M 2020, 'A simple method to assess and report thematic saturation in qualitative research', *PLoS ONE*, vol. 15, no. 5, doi: 10.1371/journal.pone.0232076.
- Sannino, A & Engeström, Y 2018, 'Cultural-historical activity theory: Founding insights and new challenges', *Cultural-Historical Psychology*, vol. 14, no. 3, pp. 43-56.
- Sehar, R, Ashraf, S & Azam, F 2019, 'The influence of social media's marketing efforts on brand equity and consumer response', *Journal of Marketing Management*, vol. 18, no. 2, pp. 30–53.
- Sharples, M, Taylor, J & Vavoula, G 2005, 'Towards a theory of mobile learning', *Technology and Education*, vol. 12, no. 2, pp. 235-246.
- Sultana, N 2018, 'Analysing the impact of social media: A study on online shoppers of apparel companies in Bangladesh', *Global Journal of Management and Business Research: E-Marketing*, vol. 18, no. 2.
- Sun, L & Zhao, L 2018, 'Technology disruptions: Exploring the changing roles of designers, makers, and users in the fashion industry', *International Journal of Fashion Design, Technology and Education*, vol. 11, no. 3, pp. 362-374.
- Tripathi, S 2019, 'Impact of social media on Generation Y for buying fashion apparel', *Journal of Content, Community & Communication*, vol. 5, pp. 105–113.
- Trust, T 2017, 'Using cultural historical activity theory to examine how teachers seek and share knowledge in a peer-to-peer professional development network', *Australasian Journal of Educational Technology*, vol. 33, no. 1, pp. 98–113.

- Yezhova, OV, Pashkevich, KL & Manoilenko, NV 2018, 'Comparative analysis of foreign models of fashion education', *Revista Romaneasca pentru Educatie Multidimensionala*, vol. 10, no. 2, pp. 88-101.
- Yu, S, Yuizono, T & Kim, E 2019, 'Integrating entrepreneurship education into design education: Toward an embeddedness model based on design thinking', *Proceeding of the 21ste International conference on engineering and product design education*, Gasgow, doi: 10.35199/epde2019.63.
- Zhao, L, Davis, L & Copeland, L 2018, 'Entrepreneurial intention: An exploratory study of fashion students', *Journal of Enterprising Culture*, vol. 26, no.1, pp. 27–50.