

Article

Clothing Motivation, Online Critical Thinking, and Behavioural Intentions of Clothing Collocation: Mediation Analysis on Chinese Youth

Yingyan Li¹ and Xiangyuan Feng^{2*}

¹ English Department of Education, Chengdu Institute Sichuan International Studies University, No.367, Golf Avenue, Daguan Town, Dujiangyan, Chengdu City, Sichuan Province, China; yingyan.li@qq.com

² Department of Teacher Education, Faculty Behavioural and Social Sciences, University of Groningen, Grote Kruisstraat 2/1, 9712TS, Groningen, The Netherlands

*Corresponding author: xiangyuan.feng@rug.nl; Tel: (+31)616283782

Abstract: Recent years have witnessed a boom of fashion bloggings sharing information about clothing and cosmetics on diverse social media platforms. Constant exposure to fashion-related digital information heavily impacts the cognition and behaviour of Chinese youth. Compared to the substantial studies on the impact of social media, scarce research has been conducted on how youth's cognitive processing of fashion-related digital information interacts with motivational factors to determine the subsequent behaviour. This study made an initial attempt to address this issue by exploring the successive associations between clothing motivation (amotivation, controlled, and autonomous motivation), online critical thinking (for information credibility, objectivity, and relevance), and the subsequent behavioural intentions. A total of 1997 Chinese youths with diverse educational backgrounds voluntarily participated in the study. Results confirmed the direct links between clothing motivation and behavioural intentions, but these links were mediated by different online critical thinking skills. This study provides new insights for both practitioners and scholars in the fields of education, psychology, social media, and marketing.

Keywords: online critical thinking; clothing motivation; behavioural intentions; clothing collocation; Chinese youth

1. Introduction

Computing technologies are constantly changing the characteristics of fashion marketing on digital media, particularly targeting the young population (Lee, Han, Cham-bourova & Kumar, 2017). Data mining on search keywords and visit histories enables automatic statistical calculation to portray users' profiles and interests, thereby generating tailored fashion-related content to attract youth's eyeballs (Ng, Chow & Choi, 2015). Consequently, an increasing number of young audiences are assembled on social media, with their aesthetics constantly and imperceptibly influenced by the converging digital fashion information (Abidin, 2016). Acknowledging such a big impact of social media and the huge potential markets they expand, clothing industry, the core of fashion-related production, starts to shift focus to digital marketing and promotion on social networks (e.g., Facebook, Twitter, Wechat), media sharing networks (e.g., Instagram, Youtube, Aiqiyi, Bilibili), social blogging networks (e.g., Tumblr, Medium, Xiaohongshu, Weibo), and social shopping networks (e.g., Polyvore, Etsy, Taobao, Kuaishou-TikTok) (Ng, Chow & Choi, 2015). For example, youths are offered cost-effective avenues to interact with their favorite fashion brands and bloggers by searching, sharing, and commenting on clothing-related content (Sudha & Sheena, 2017). In the process of these interactions, their clothing mindset and behaviour are, to some extent, molded through explicit and implicit encouragement of youth's endorsement of fashion bloggings (Sudha & Sheena, 2017).

Such phenomena have attracted substantial scholarly attention in recent years, with many concerns addressed regarding the impact of social media on youth development (Han & Choi, 2019). Past studies have found mixed effects of fashion blogging on youth's clothing-related cognition (Oh & Nah, 2021), emotion (Mahmoud, Hack-Polay, Grigoriou, Mohr & Fuxman, 2021), and behaviour (Mahmoud, Hack-Polay, Grigoriou, Mohr & Fuxman, 2021; Son, Nam & Diddi, 2022) as well as their academic performance (Barnes & Tynan, 2007; Garza, 2002; Lundy, Schenkel, Akrie, & Walker, 2010). Additionally, inconsistent findings were also obtained on the development of youth's aesthetic appreciation under the heavy exposure of digital fashion-related content (Park, 2014; Reilly & Hawley, 2019). Some assumptions are made to explain such phenomena that youth's own (meta)cognitive and affective resources may interact with personal and contextual backgrounds to determine how they process digital information, which to some extent weakens the impact of youth's exposure to the converging digital information (Güzin & ŞENER, 2020). Unfortunately, compared to a large number of empirical studies tapping into the effects of fashion blogging, little has been done to unravel the underlying mechanisms of how youth's own mental resources interactively process digital fashion information and how such processes influence their clothing behaviours (Wong, 2007).

To address this gap, the present study made an initial attempt by exploring the relationships between youth's clothing motivation (i.e., cognitive resources), online critical thinking (OCT; i.e., metacognitive, cognitive, and affective resources), and the subsequent behavioural intentions with respect to clothing collocation. OCT is considered one key competence to evaluate the quality and integrity of digital content and to self-regulate digital behaviour (Broadbent & Poon, 2015). The exploration of how OCT mediates the transferring processes from youth's clothing motivation to decision-making and behaviour highlights youth's psychological functioning in this digitalized age. In general, the study contributes to the knowledge base of youth's cognitive processing of domain-specific digital information, providing new insights for practitioners and researchers in the fields of education, psychology, and social media and marketing.

2. Literature review

2.1. Motivation for clothing collocation

2.1.1. Self-determination theory

Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2017) reconstructs the dichotomy of internal versus external motivation into a continuum of intrinsic-extrinsic regulation. At the intrinsic pole of this continuum lie the deep-rooted unconscious drives and fully internalized goals and at the other pole are the imposed goals or forces (Deci & Ryan, 1991). To better operationalize these motives in empirical studies, the categorization of autonomous and controlled motivation is proposed (Deci & Ryan, 1985). The former refers to individuals' agreement with the activity value and the belief that activities are consistent with self-awareness. The latter is comprised of relatively external drives such as compliance with authority, desire for external rewards, or punishment avoidance (Ryan & Deci, 2017). The two types of motivation differ in the degree to which individuals self-determine and endorse the value of the action or activity they are doing. In addition, Ryan and Deci (2017) also postulate the existence of amotivation, which they refer to as a complete lack of self-determination and endorsement in behaviours. It is suggested that amotivation arises when people feel incompetent in controlling the accidental process or consequences or when they do not recognize any value of doing something (Ryan & Deci, 2002).

2.1.2. Different types of clothing motivation

Autonomous and controlled motivation for clothing collocation

Specifically, regarding clothing behaviours, it has been found that individuals possess different types of motives and preferences (Broadbent & Poon, 2015; Kwon, 1988).

Some people may enjoy collocating clothes due to pleasure, interest, and self-esteem (Taljaard & Sonnenberg, 2019). The efforts they invest in doing clothing collocation are considered meaningful and enjoyable since some basic psychological needs (i.e., autonomy, relatedness, and competence) are well satisfied during the process of selection and self-expression (e.g., choosing and presenting different styles, clothes, shoes, and accessories for self-fulfillment and/or certain social functions) (Gurung, Punke, Brickner, & Badalamenti, 2018; O'Cass & Siahtiri, 2013). To put it differently, clothing behaviours are, to a large extent, self-determined and volitive when there is a perceived fusion of these behaviours with the demands for self-identity and confidence, or pure enjoyment. Such demands can be considered as the autonomous motivation for clothing collocation. In contrast to autonomous motivation, controlled motivation for clothing collocation refers to the externally imposed goals set by school regulations, workplace dressing codes, and social norms, which are also found to be the major incentives for clothing behaviours (Khare, Mishra, & Parveen, 2012). The divergence between individuals' self-concept and socially defined value and aesthetics makes clothing behaviours less self-determined and enjoyable. In general, either intrinsically or extrinsically motivated, people's intentions to collocate clothes tend to endure as a result of the internal gains (e.g., enjoyment, confidence) and external rewards (e.g., punishment avoidance, social recognition). Therefore, it is hypothesized that both types of motivation are positively linked to youth's intention of clothing collocation, yet in varying degrees.

Amotivation for clothing collocation

In light of Ryan and Deci's (2017) SDT, amotivation for clothing collocation can be referred to as people's lacking any desire or intention to spend time and efforts on clothing behaviour, which is theoretically opposite to autonomous and controlled motivation. It arises when people consider such behaviour meaningless and see little prospect of reward or gains. It is thereby hypothesized that amotivation is negatively related to both types of motivation for clothing collocation and the subsequent behavioural intentions. Additionally, the strength of the negative relationship between amotivation and autonomous motivation is assumed to be larger than that with controlled motivation, since people who value and enjoy more about clothing more are less likely to lose their motives.

2.2. *Thinking critically about digital information of clothing*

With the rapid development of social media, large quantities of user-generated content has been produced by the bottom-up participation of the mass, resulting in messy and fragmented digital data that varies considerably in professionalism, objectivity, fairness, transparency, and trustworthiness (Paris, 2002; Plencner, 2014). Great challenges are thereby posed to youth (Graham & Metaxas, 2003). Among many cognitive practices, critical thinking (CT) is considered one key skill to evaluate the quality and integrity of digital content and to self-regulate digital behaviour (Broadbent & Poon, 2015).

2.2.1. General critical thinking skills

To date, numerous definitions of CT have been proposed, with few universally accepted by scholars and practitioners in the educational field. As is synthesized in Liu, Frankel and Roohr's review study on seven CT frameworks, CT is generally referred to as the generic reasoning abilities of deliberately weighing evidence and processing information (e.g., identifying, analyzing, synthesizing, evaluating) to generate actionable knowledge for effective decision-making (Liu, Frankel & Roohr, 2014). Operationally, CT is constructed by the widely accepted Bloom's taxonomy (Karthwohl, 2002) as a multidimensional quality, which includes three sub-dimensions: cognitive, affective, and psychomotor. The first two are considered relevant to the education field. The cognitive domain consists of a more hierarchical knowledge domain (i.e., knowledge of facts, concepts, procedures, and metacognition) and a less hierarchical cognitive-process domain (i.e., ability and process of remembering, comprehension, application, analysis, evaluation, inference,

creation) (Karthwohl, 2002). The affective domain includes the personality and dispositional factors that may impact individuals' willingness to conduct and pursue CT activities (Halpern, 2013; Karthwohl, 2002). In this vein, the present study takes the same viewpoint by interpreting CT as a set of cognitive, metacognitive, and affective resources of youth.

2.2.2. Online critical thinking

Conceptualization of online critical thinking

In a digitalized post-truth era, personal attitudes and beliefs are, in many cases, more powerful than objective and factual information in the virtual space (Cooke, 2017; Mrah & Tizaoui, 2018). Consequently, it requires CT to serve as a front-line for youth to more unbiasedly and accurately process digital content that is laden with ambiguous and segmented information, polarizing ideas, and algorithmic biases (Ku, Kong, Song, Deng, Kang & Hu, 2019). Given that the youth are constantly exposed to mass online information (Flanagin & Metzger, 2008), their online CT (OCT) skills may be largely shaped by digital experience and thus possess some unique features that are distinct from the general CT skills. In order to identify the additional characteristics of OCT in digitalized age, Paris (2002) conducted an empirical study on the evaluative dimensions of youth's OCT practices. In the study, OCT is empirically categorized based on the objects of CT — online information, which consists of four dimensions of information trustworthiness, authority, objectivity, and relevancy. Specifically, OCT-trustworthiness refers to the evaluation of content accuracy that is supported by the quality and logics of information, and the stability and extensibility of references. OCT-authority examines the source and qualification of the information, which can be judged through the identity, experience, and credibility of authors and publishing sites. OCT-objectivity evaluates the degrees of neutrality and bias of the information, which is reflected by the existence of misleading statements, one-sided arguments, and sponsoring groups for published statements. Lastly, OCT-relevance estimates the recency, pertinence, and suitability of information based on youth's different reading purposes (Paris, 2002; Plencner, 2014).

Measurement of online critical thinking

To validly assess CT in educational contexts, several survey-style inventories and multiple-choice tests (e.g., California Critical Thinking Skills Test; Facione & Facione, 1994; Collegiate Assessment of Academic Proficiency [CAAP] test; Pike, 1989; American College Testing [ACT]; Pascarella & Terenzini, 1991; Cornell Critical Thinking Test [CCTT]; Gibbs, 1985) as well as self-reported scales (e.g., modified Motivated Strategies for Learning Questionnaire [MSLQ]; Nold, 2017) have been developed and validated across contexts. Compared to the CT tests that are designed to challenge individuals to activate every CT ability through prompts in approximately authentic scenarios, the self-assessment CT scales are argued to miss certain elements of CT (e.g., making judgment and explanation; Ku, 2009; Stanovich, 2009). However, the established CT scales with good psychometric properties are still considered informative and insightful for understanding the construct of CT, especially regarding its evaluative and attitudinal disposition dimensions (Liu, Frankel & Roohr, 2014). Therefore, in order to well measure youth's understanding of OCT (i.e., how they can critically process and evaluate fashion-related digital information) as well as their dispositional attitude towards activating such practices, self-reported scales with a finite set of domain-specific prompts were developed by Paris (2002).

2.3. Online critical thinking, motivation, and intention for clothing collocation

In view of the dual-process reasoning model proposed by Stanovich and West (2000), youth's processing of fashion-related information on social media may go through two systems: the heuristic and the analytical. The first system of thinking mainly relies on

individuals' intuition, prior beliefs, and intrinsic orientations, whereas the latter is largely dependent on reflective and elaborate reasoning of the situations, which corresponds with the CT standards (Ku, Kong, Song, Deng, Kang & Hu, 2019). In this vein, intuitively oriented motivation tends to relate closely with heuristics and subsequently results in fast decisions and judgments based on subjective beliefs and interests (De Neys, 2006). Comparatively, externally imposed goals may trigger more CT processes, obstructing the automatic operation of intuition and activating cognitive recourses for more in-depth and elaborative evaluation of the information in order to better meet the external demands.

To date, the issue of how youth process digital information about clothing is still underexplored. Nevertheless, grounded on the aforementioned theories, it is expected that controlled clothing motivation is closely associated with all OCT practices, especially regarding information credibility. If youth are motivated by externally-imposed goals (e.g., school or workplace dressing codes), they may invest more effort on evaluating whether the information they obtain accurately and unbiasedly echoes the external regulations and social norms. On the other hand, youth with high levels of autonomous clothing motivation may pay more attention to the evaluation of content relevancy, using it as the prior criterion for information selection. With emphasis played on the different aspects of digital clothing information, youth are assumed to make different decisions and exhibit varying behaviours with respect to clothing collocation. In contrast to controlled and autonomous motivation, amotivation is proposed to bear negative relationships with all types of OCT and the subsequent behavioural intentions youth hold for clothing collocation.

3. The present study

To empirically test the successive relationships hypothesized above, the present study constructed a comprehensive model (see Figure 1). In this model, controlled clothing motivation is positively linked to all OCT skills, which in turn relate to behavioral intentions of clothing collocation (e.g., invested time and effort, to follow clothing trends) in different manners. As for autonomous clothing motivation, it is positively associated with OCT for information relevancy. However, due to the lack of theoretical support, its links with the other OCT practices remain exploratory (depicted in dashed lines). In contrast to these two types of clothing motivation, amotivation is negatively related to all OCT practices, suggesting that the absence of motives may result in youth's avoidance of activating and practicing any OCT on clothing-related digital information. Additionally, amotivation for clothing collocation is also negatively associated with the subsequent collocating intentions, as opposed to the positive relationships between autonomous and controlled motivation and collocating intentions. On condition that these relationships are confirmed, the mediating roles of different OCT practices can further be explored to answer the following questions:

Research question 1: Do youth's OCT practices for digital clothing information mediate the relationships between their motivation for clothing collocation (i.e., controlled, autonomous) and the subsequent clothing behavioural intentions (e.g., collocation effort, to follow bloggers' clothing trends)?

Research question 2: Do youth's OCT practices mediate the relationships between their amotivation for clothing collocation and the subsequent clothing behavioural intentions?

Research question 3: Do the mediating effects vary across different OCT practices?

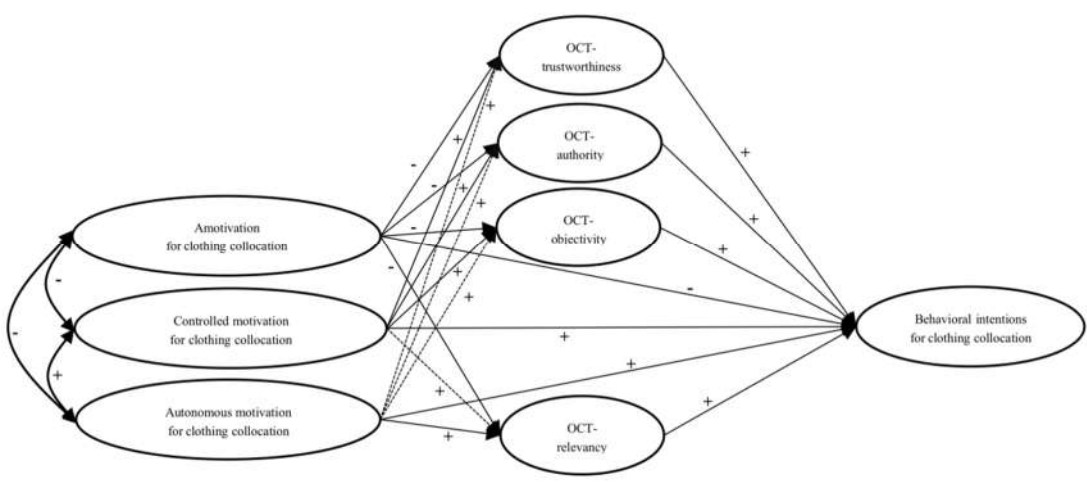


Figure 1. Hypothesized comprehensive model (dashed links representing exploratory relationships).

4. Research methods

4.1. Participants

A nationally representative sample of 2101 Chinese youth aged 15-24 was approached via Wenjuanxing (<https://www.wenjuan.com/s/UZBZJvRrWH/#>). They were asked to complete the online questionnaires. During the survey, fidelity checks were performed, removing the data of the participants who did not pass the checks and remaining those who did until the quota was reached. The final sample includes 1997 youth ($M_{age} = 18.68$, $SD = 1.99$), with a relatively skewed distribution of gender (39.3% males, 60.7% females) when compared to the national statistics (53.3% males; Textor, 2021). In total, 47.5% of the participants have secondary education, and 52.6% have higher education as their highest level of educational attainment. Before the delivery of questionnaires, information sheets and consent forms were distributed and informed. Participation was voluntary and anonymous.

4.2. Measures

Motivation for clothing collocation. Motivation for Clothing Collocation Scale (MCCS) was revised based on the existing motivation scales validated in SDT studies (Hagger, Hardcastle, Chater, Mallett, Pal, & Chatzisarantis, 2014; Ren, Zhang & Wei, 2021; Ryan & Deci, 2017). The scale includes 10 items, with 2 measuring amotivation, 4 for autonomous motivation, and 4 for controlled motivation (see Appendix 1). Domain-specific content of the original items (see Multidimensional Work Motivation Scale [MWMS]; Ren, Zhang & Wei, 2021) was replaced by “clothing collocation”. Examples are *I don’t care about my clothing collocation at all* in the Amotivation Subscale, *The time and effort I spent on clothing collocation are worth it because it makes me feel comfortable* in the Autonomous Motivation Subscale, and *If I do not collocate my clothes, I would feel anxious* in the Controlled Motivation Subscale. Participants scored their responses on a five-point Likert-scale (1 = *completely disagree*, 5 = *completely agree*).

OCT practices. The 11-item Critical Thought Processes Scale (Paris, 2002) was adapted to measure youth’s OCT practices for clothing-related information, which includes the subscales of trustworthiness (3 items), authority (2 items), objectivity (2 items), and relevance (3 items) (see Appendix 1). To better examine respondents’ domain-specific OCT, clothing-related information is added to the item content. Examples are *I concern and check the qualifications, credentials, and experience of the author(s) who share clothing-related information on social media (e.g., Weibo big bloggers certification, the number of fans, bloggers’ academic certificate, working experience and reputation in the fashion industry)* in the Authority Subscale and *I consider and evaluate the neutrality (e.g., personal vs. impersonal stance, facts versus opinions, the existence of biases) of the clothing-related information presented on the*

websites in the Objectivity Subscale. Participants responded to a 5-point Likert scale, ranging from 1 (*completely not true*) to 5 (*completely true*). The scales were translated and back-translated between English and Chinese, following the Beaton et al. (2000)'s guidelines. Given that the original scales were developed in the western contexts, the reliability and validity of the scale were tested in the Chinese context.

Background factors and clothing intentions. Items to collect personal characteristics (e.g., gender, age, education level, average income) were embedded into the above scales. In addition, participants' exposure to clothing-related information on social media (e.g., time length and frequency of usage) were also surveyed. Three indicators were designed to measure behavioural intentions for clothing collocation: average time spent on clothing collocation, past behaviour and future intent of following the clothing trends of bloggings on social media.

4.3. Data analysis

4.3.1 Scale validation

To validate the scales in the Chinese context, exploratory and confirmative factor analyses were conducted using SPSS 26.0.1 and Mplus 8.3. Factor models were evaluated by model parsimony, goodness of fit indices, factor loadings, and model interpretation. Items with crossed loadings were removed, on the condition that there are at least two additional paralleled items left in the scale measuring the same construct. Modification indices were also referred to when removing items for better model fit. Cutoff criteria of fit indices were set to comparative fit index (CFI) and Tucker-Lewis Index (TLI) above .90, as well as Standardized Root Mean Square Residual (SRMR) and the root mean square error of approximation (RMSEA) below .08. Item loadings and correlation coefficients were used to check discriminant validity, ensuring the differentiation of corrected factors measured in one scale. After the calibration of the scales, the reliability coefficients of Cronbach's alpha were estimated. Coefficients > 0.5 are considered acceptable considering the characteristics of all subscales (Streiner, 2003). In addition to the statistical tests, cognitive interviews ($N = 5$) were to be performed on condition that moderate to major modifications were done to the scale.

4.3.2. Correlation analysis

Descriptive analysis was performed to calculate the means and standard deviations of raw scores. However, considering the heterogeneity of items and the multidimensionality of scales, factor scores instead of mean scores were used for the subsequent correlation analysis. A correlation model was constructed using Mplus 8.3 to examine the successive relationships between personal characteristics, different types of (a)motivation for clothing collocation, OCT practices, and behavioural intentions of clothing collocation.

4.3.3. Mediation analysis

On the condition that the successive links between (a)motivation, OCT practices, and behavioral intentions of clothing collocation were supported by the empirical evidence, the mediating effects of different OCT practices were analyzed in three separate models using Mplus 8.3. Goodness of fit indices, path coefficients, and mediation effects were estimated. The characteristics of different mediators (i.e., OCT practices) were compared with each other.

5. Research results

5.1. Scale validation

The results of exploratory factor analyses with varimax rotation show (1) two factors in the OCT Scale with eigenvalues larger than 1 and one factor larger than 0.6, explaining 58.2% to 72.5% of the total variance of OCT scores; (2) two factors in the MCCS with eigenvalues larger than 1 and one factor larger than 0.8, explaining 58.9% to 67.2% of the total variance of the MCCS scores. These exploratory results, to some extent, agree with

the theory-led factorial structures constructed in the existing studies, providing empirical evidence for the subsequent confirmative factor analysis.

Based on the existing theories, a four-factor model was specified for OCT and a three-factor model was constructed for clothing motivation. However, the above empirical evidence suggests that alternative structures should also be tested and compared to these established models. As indicated in Table 1 and Table 2, three-factor model of OCTA with items 2, 5, and 10 deleted and with two correlated residuals shows the best model fit (CFI = 0.955; TLI = 0.933, RMSEA = 0.079, SRMR = 0.038) and acceptable factor loadings ($\lambda_{\text{items}} = 0.585\text{--}0.843$, $p < .001$). In this model, the items designed to measure the original two domains of information trustworthiness and authority were combined into one subscale, measuring the general credibility of the information. The correlation between OCT-credibility and OCT objectivity is 0.670 ($p < .001$) and correlation between OCT-credibility and OCT relevancy is 0.821 ($p < .001$). The CFA results suggested that OCT objectivity is perfectly and positively correlated with OCT relevancy ($r = 1.000$). However, considering the conceptual differentiation of these two domains, the three-factor solution is still accepted in this study. Cognitive interviews were taken to check participants' interpretation and understanding of this solution. Content analysis results suggest that participants tend to perceive authority as one important criterion to judge whether a piece of digital information is trustworthy and credible. In addition, cross-referencing across platforms is found one popular practice employed by participants to evaluate the uptodateness of information.

The hypothesized factorial structure of clothing motivation was empirically supported. Three factor model with items 2 and 10 excluded best fits the data (CFI = 0.989; TLI = 0.981, RMSEA = 0.071, SRMR = 0.017) (see Table 1). As illustrated in Table 2, amotivation for clothing collocation is found negatively correlated with the autonomous motivation ($r = -0.672$, $p < .001$) and controlled motivation ($r = -0.499$, $p < .001$). In addition, a strong and positive correlation is found between the latter two domains ($r = 0.727$, $p < .001$). After the modification and validation of these scales, the internal consistency of each subscale was estimated. As indicated in Table 2, all subscales show acceptable to high Cronbach's alpha coefficients ($\alpha = .631\text{--}.823$). The internal consistency of the OCT-relevancy Scale is relatively low ($\alpha = 0.543$) but still acceptable due to its limited number of heterogeneous items (Streiner, 2003).

Table 1. Fit indices of different factor structures of the OCT Scale and MCCS.

	Model	Modification	Robust goodness-of-fit		CFI	TLI	RMSEA	SRMR
			Chi-square	df				
OCT Scale	4 correlated factors: Trustworthiness: Item 1-3 Authority: Item 4, 5 Objectivity: Item 6, 7 Relevancy: Item 8-10	All items	643.797*	29	0.918	0.873	0.103	0.046
	3 correlated factors: Credibility: Item 1-5 Objectivity: Item 6, 7 Relevancy: Item 8-10	All items	1413.947*	32	0.917	0.883	0.147	0.043
	3 correlated factors: Credibility: Item 1, 3, 4 Objectivity: Item 6, 7 Relevancy: Item 8, 9	Item 2, 5, and 10 excluded	190.766*	11	0.983	0.968	0.090	0.020
	3 correlated factors: Credibility: Item 1, 3, 4 Objectivity: Item 6, 7 Relevancy: Item 8, 9	Item 2, 5, and 10 excluded; Residuals of Item 1 with 8; Residuals of Item 4 with 8;	121.232*	10	0.990	0.978	0.075	0.016
MCCS	2 correlated factors	All items	2435.952*	34	0.878	0.838	0.188	0.069
	3 correlated factors	All items	1158.999*	32	0.943	0.919	0.133	0.046
	3 correlated factors	Items 10 excluded	424.318*	24	0.979	0.968	0.091	0.023
	3 correlated factors	Item 2 and 10 excluded	189.095*	17	0.989	0.981	0.071	0.017

* $p < .001$

Table 2. Item descriptives, factor loadings, factor correlations, and reliability coefficients.

	Scale dimensions	Items	Mean	SD	Factor loadings	Factor correlation		Cronbach's alpha
						F2	F3	
OCT Scale	Factor 1: Credibility	1	2.691	1.051	0.710*	0.670*	0.821*	0.791
		3	2.830	0.991	0.791*			
		4	2.797	0.980	0.843*			
	Factor 2: Objectivity	6	3.00	0.986	0.736*	1.000*		0.631
		7	3.26	0.931	0.693*			
	Factor 3: Relevancy	8	2.89	0.972	0.711*			0.543
		9	3.64	0.942	0.585*			
						F2	F3	
MCCS	Factor 1: Amotivation	1	2.21	0.983	0.824*	-0.672*	-0.499*	0.722
		3	2.25	0.987	0.762*			
	Factor 2: Autonomous motivation	4	3.613	0.970	0.810*	0.727*		0.823
		5	3.385	0.951	0.836*			
		6	3.661	0.949	0.815*			
	Factor 3: Controlled motivation	7	2.924	1.041	0.821*			0.787
		8	3.120	0.949	0.713*			
		9	2.939	1.008	0.806*			

* $p < .001$

5.2. Correlations between motivation, OCT, intentions, and background factors

Considering the heterogeneous factor loadings of items in the scales, factor scores instead of means of raw scores were used in the correlation model, in which behavioural intentions and all background variables were included as covariates of OCT practices and clothing motivation. The model shows satisfactory model fit (CFI = 0.951; TLI = 0.910, RMSEA = 0.066, SRMR = 0.046). As shown in Table 3, amotivation is negatively related to all OCT practices ($r_s = -0.534 - -0.254, p < .001$) and clothing collocation intentions ($r_s = -0.421 - -0.384, p < .001$). Regarding the background variables, significant effects of gender, education levels, average income, and social media usage are found on amotivation for clothing collocation ($r_s = -0.375 - -0.054, p < .05$). On the contrary, autonomous motivation is positively associated with all OCT types ($r_s = 0.512 - 0.781, p < .001$), with the strongest relationship found between autonomous motivation and OCT-relevancy ($r = 0.781, p < .001$). Additionally, results show positive relationships between autonomous motivation and clothing intentions ($r_s = 0.376 - 0.459, p < .001$) as well as all background variables ($r_s = 0.104 - 0.288, p < .001$). Specifically, female youth with higher education levels and more average income reported greater autonomous motivation for clothing collocation. And such motives may increase with age ($r = 0.058, p < .05$) and the growing exposure to social media ($r_s = 0.273 - 0.393, p < .001$). Similarly, controlled motivation is also found to be positively linked to all OCT types ($r_s = 0.436 - 0.654, p < .001$) and clothing intentions ($r_s = 0.298 - 0.325, p < .001$). However, the strength of these links is slightly weaker when compared with autonomous motivation, expect for the correlations with OCT-credibility ($r_{\text{controlled-credibility}} = 0.590, r_{\text{autonomous-credibility}} = 0.588, p < .001$). Female youth with more average income and exposure to social media show higher levels of controlled motivation ($r_s = 0.055 - 0.300, p < .05$).

Compared to clothing motivation, OCT for clothing information bears less close relationship with the subsequent behavioural intentions ($r_s = 0.198 - 0.426, p < .001$). Among the three OCT practices, OCT for information relevancy seems to influence youth's intentions for clothing collocation the most ($r_s = 0.318 - 0.426, p < .001$). All background variables other than average income were found to affect OCT for relevancy. Younger females with lower education levels and more exposure to social media show greater willingness to evaluate the relevancy of clothing information on social media ($r_s = 0.092 - 0.368, p < .05$). Furthermore, the effects of gender, average income, and social media usage were found on OCT for information credibility and objectivity, indicating that female youth who have more income and exposure to social media are more willing to think critically about these two aspects of digital information of clothing ($r_s = 0.066 - 0.324, p < .05$).

Table 3. Correlation coefficients between motivation, OCT, clothing collocation intentions, and background variables.

		OCT -F1	OCT -F2	OCT- F3	MCC -F1	MCC -F2	MCC -F3	Intention -Past	Intention -Future	Intention- collocation	Gender	Age	Edu	Average income	Social media usage-amount
OCTA	Factor 1: Credibility														
	Factor 2: Objectivity	0.668**													
	Factor 3: Relevancy	0.756**	1.000**												
MCC	Factor 1: Amotivation	-0.310**	-0.254**	-0.534*											
	Factor 2: Autonomous motivation	0.588**	0.512**	0.781**	-0.672**										
	Factor 3: Controlled motivation	0.590**	0.436**	0.654**	-0.499**	0.727**									
Intentions	Mimicing -Past	0.372**	0.264**	0.426**	-0.421**	0.453**	0.325**								
	Mimicing -Future	0.322**	0.297**	0.422**	-0.405**	0.459**	0.320**	0.585**							
Background	Clothing collocation	0.256**	0.198**	0.318**	-0.384**	0.376**	0.298**	0.383**	0.309**						
	Gender	0.150**	0.113**	0.268**	-0.235**	0.288**	0.125**	0.281**	0.294**	0.189**					
	Age	0.017	-0.005	-0.092*	-0.017	0.058*	-0.010	0.104**	0.038	0.096**					
	Education	0.022	0.015	-0.074*	-0.054*	0.104**	0.000	0.112**	0.042	0.136**					
	Average income	0.066*	0.105**	0.050	-0.146**	0.174**	0.055*	0.189**	0.110**	0.172**	0.044*	0.365**	0.460**		
	Social media usage- amount	0.204**	0.175**	0.288**	-0.284**	0.273**	0.182**	0.284**	0.262**	0.159**	0.234**	-0.082**	-0.093**	0.015	
	Social media usage- frequency	0.324**	0.195**	0.368**	-0.375**	0.393**	0.300**	0.401**	0.345**	0.291**	0.235**	0.032	0.047*	0.143**	0.283**

* indicates $p < .001$; ** indicates $p < .01$

5.3. Different mediating effects of OCT practices

Correlation results warrant the subsequent tests of mediation models, where background variables are included as controlled variables. Considering that OCT-objectivity and OCT-relevancy are perfectly correlated, the mediating effects of them were tested in separate models. In general, the mediation analysis yields good model fit ($CFI/TLI > 0.900$, $RMSEA/SRMR < 0.79$). As illustrated in Figure 2, OCT-credibility partially suppresses the negative relationships between amotivation and clothing collocation time ($\beta_{\text{direct}} = -0.658$, $p < .001$; $\beta_{\text{mediation}} = 0.189$, $p < .001$) as well as amotivation and future intent to follow clothing trends on social media ($\beta_{\text{direct}} = -0.602$, $p < .001$; $\beta_{\text{mediation}} = 0.184$, $p < .001$). OCT-objectivity is found to partially suppress the negative links between amotivation and youth's clothing collocation time ($\beta_{\text{direct}} = -0.658$, $p < .001$; $\beta_{\text{mediation}} = 0.111$, $p < .01$). In contrast, OCT-relevancy facilitates the negative relationships between amotivation and the future intention to mimic ($\beta_{\text{direct}} = -0.353$, $p < .001$; $\beta_{\text{mediation}} = -0.113$, $p < .01$). Specifically, the links between amotivation and three types of OCT are all negative and strong ($\beta_s = -0.804 - -0.703$, $p < .001$). However, the strength and direction of relationships between OCT and clothing intentions differ ($\beta_{\text{CT1-future mimic}} = -0.167$, $\beta_{\text{CT1-collocation}} = -0.212$, $\beta_{\text{CT2-collocation}} = -0.137$, $\beta_{\text{CT3-future mimic}} = 0.100$, $p < .01$), leading to varying mediating effects.

Furthermore, OCT-relevancy was found to facilitate the positive relationships between autonomous and controlled motivation and future mimic intent ($\beta_{\text{direct_AM}} = 0.340$, $p < .001$; $\beta_{\text{mediation_AM}} = 0.073$, $p < .05$; $\beta_{\text{direct_CM}} = 0.310$, $p < .001$; $\beta_{\text{mediation}} = 0.120$, $p < .05$). The mediating effect of OCT-credibility was found on the links between controlled motivation and clothing collocation time ($\beta_{\text{direct}} = 0.427$, $p < .001$; $\beta_{\text{mediation}} = -0.086$, $p < .05$). Such a suppression effect is caused by the negative association between OCT and the behavioural intention ($\beta = -0.112$, $p < .05$). In general, no mediating effect of any OCT practices other than OCT-relevancy was found on autonomous motivation. In contrast, mediating effects of all three OCT practices were discovered on amotivation linking to clothing intentions, with the effects of OCT-credibility the strongest ($\beta = 0.184 - 0.189$).

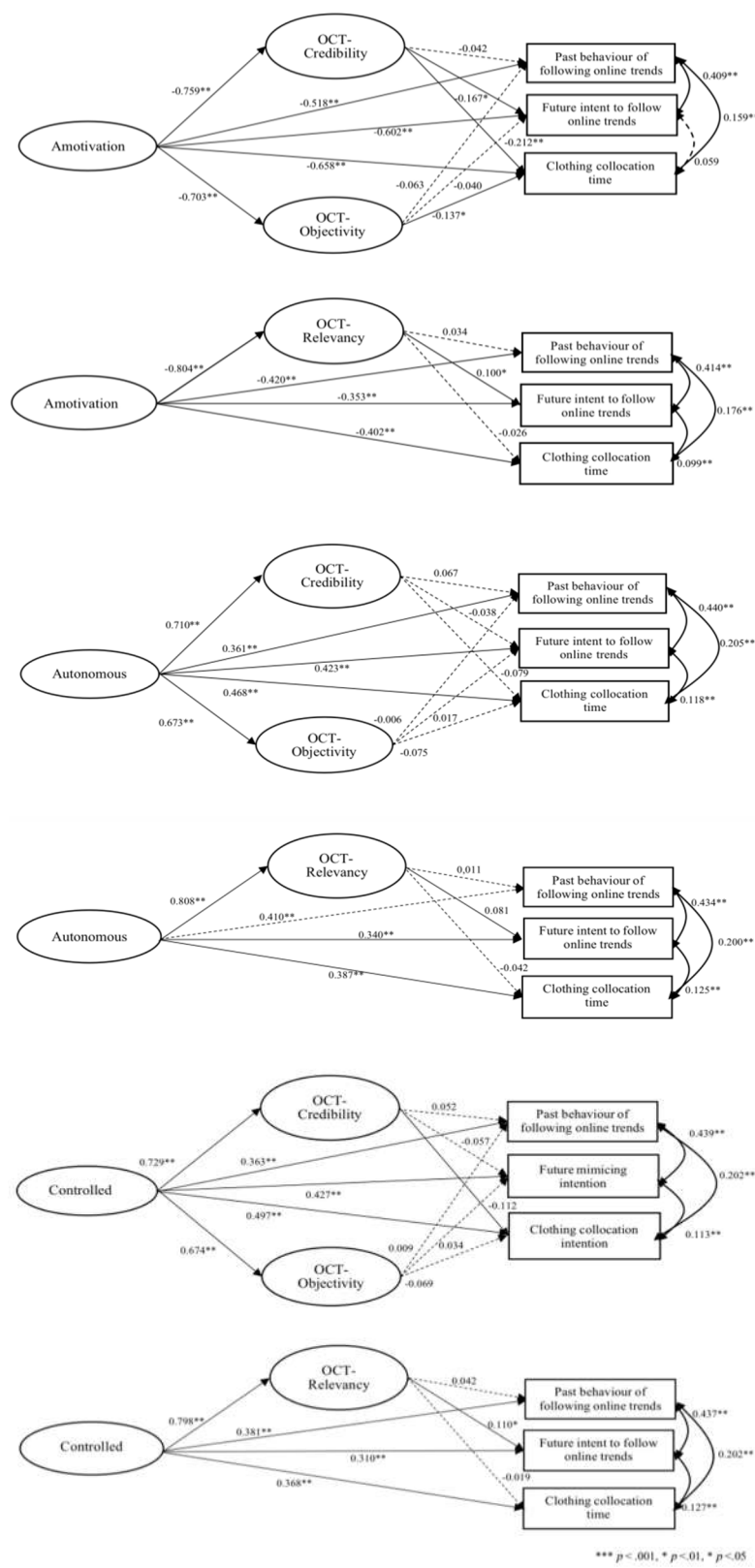


Figure 2. Path coefficients in mediation models (dashed lines indicating non-significant relationships).

6. Discussion and conclusion

The first objective of this study is to examine the successive relationships between Chinese youth’s motivation for clothing collocation, OCT practices, and the subsequent

behavioral intentions. In this study, OCT is interpreted as youth's mental resources which integratedly reflect their cognitive, metacognitive, and affective characteristics (see Liu, Frankel & Roohr, 2014). Given that validated instruments to measure OCT in fashion-related domains are scarce, this study modified an existing OCT scale (Paris, 2002). The scale is designed to measure youth's understanding and willingness of OCT practices when exposed to clothing-related information on social media. Empirical evidence was gained in this study to confirm that the OCT Scale can validly and reliably measure the major OCT practices of Chinese youth. These practices differ in the objects of OCT, that is, the credibility, objectivity, and relevancy of digital clothing-related information. The two correlated item residuals can be explained by the operational overlap between the factors they measure (Items 1 and 4: cross-referencing across platforms and across information resources; Items 1 and 8: evaluating information updateness with cross-referencing practices).

In addition to OCT, this study also proposes a key concept of motivation for clothing collocation. Grounded on the established motivation scales (e.g., Hagger, Hardcastle, Chater, Mallett, Pal, & Chatzisarantis, 2014; Ren, Zhang & Wei, 2021) following self-determination theory (Ryan & Deci, 2017), the present study theoretically and operationally divides clothing motivation into three dimensions. The complete absence of motives to collocate clothes is defined as amotivation. Opposite to amotivation are the existence of externally imposed motives (e.g., dressing codes, social norms for clothing), which is conceptualized as controlled motivation, and internally-generated volition (e.g., fulfillment of basic psychological needs, pure enjoyment) defined as autonomous motivation. The MCCS scale was validated in the Chinese context, with which this study found the co-occurrence of controlled and autonomous motivation as well as the exclusion of other motives for amotivation. Particularly, youth who lose their intrinsic clothing incentives relative to external goals are more likely to be demotivated. In general, these findings agree with the characteristics of the generic motivation proposed by many previous SDT research (e.g., Ryan & Deci, 2002; Ryan & Deci, 2017).

With the validated scales, this study obtained empirical evidence to support all hypothesized correlations between different clothing motivation, OCT practices, and intentions with respect to clothing collocation. Amotivation was found to negatively relate to all other factors, which is consistent with Ryan and Deci's (2017) theory. It seems that the complete absence of clothing motives may lead to youth's avoidance of investing any time and effort on the relevant issues, particularly regarding the self-relevance of the clothing information they read (Browne, Pitts & Wetherbe, 2007). The effects of background factors suggest that male youth with lower education levels, less monthly income, and less social media usage show relatively higher levels of amotivation. In contrast to amotivation, autonomous and controlled motivation was found to positively link to all OCT practices and the following clothing intentions. This finding indicates that the existence of cognitive stimuli, either external or internal, can not only activate more mental resources (e.g., OCT of clothing-related information on social media) but also induce more subsequent behaviour (e.g., spending time on collocating clothes, following clothing trends). Compared to controlled motivation, autonomous motivation's association with OCT and behavioural intentions seem to be stronger, except for OCT on information credibility. This finding partially supports the dual-process reasoning model (Stanovich & West, 2000), suggesting that externally imposed clothing goals tend to trigger more CT processes on the accuracy and authority of the digital information. In addition, the finding also confirms the hypothesis that intrinsically motivated youth may pay more attention to content relevancy, activating their mental resources to evaluate whether the clothing information they read on social media is updated and applicable to themselves. So far, not enough theories or evidence are obtained to further explain the stronger link between autonomous motivation and OCT for information objectivity, a finding that is inconsistent with the hypothesis. In general, female youth with higher income are more motivated, with the better-educated ones exhibiting more intrinsic motives and the ones with heavier exposure to digital clothing information reporting more external incentives.

The second major objective of this study is to explore the mediating effects of OCT practices on the links between youth's motivation and behavioural intentions for clothing collocation. By doing this, the present study sought to reveal the roles different OCT practices play in altering the process of youth's cognition transferring into behaviour when they are exposed to vast amounts of ambiguous and segmented digital information (Ku, Kong, Song, Deng, Kang & Hu, 2019). To better identify these roles, the mediating effects are interpreted and discussed by OCT practice. Firstly, OCT on information credibility was found to suppress the effects of amotivation and controlled motivation on the behavioural intention(s) of clothing collocation. This is mainly caused by the negative relationships between OCT-credibility and intention(s). The critical evaluation of clothing information credibility (e.g., quality and logic of information, stability and extensibility of references, trustworthiness of authors and publishing sites) is very cognitively demanding (Metzger & Flanagin, 2013; Metzger, Flanagin & Medders, 2010). Such a process may well consume youth's initial intentions to collocate clothes with reference to the credible information they themselves filter from social media. In this case, when youth conduct more OCT-credibility practices as a result of imposed goals, their externally motivated intentions to collocate clothes will be slightly decreased. On the contrary, when this OCT practice is inhibited by amotivation, the subsequent behavioural intentions will slightly increase, which to some extent alleviates the restraining effect of amotivation on clothing intentions. This explanation also applies to how OCT-objectivity weakens the suppressive effect of amotivation on youth's clothing collocation time.

Similarly, OCT on information relevancy was found to facilitate the effects of all three types of motivation on youth's intent to follow online fashion trends in the future. Contrary to OCT-credibility and OCT-objectivity, OCT-relevancy is positively related to youth's behavioural intentions. When youth are motivated by enjoyment and self-fulfillment, they will search for digital clothing information that is updated, pertinent, and suitable for themselves. In the process of collecting such information, their intent to follow the trends promoted in it will grow, which slightly increases the facilitating effect of intrinsic motives on this intent. Likewise, if youth are driven by social norms and dressing codes, they may also hold certain degree of interest in conducting OCT practices on information relevancy. And the discovery of applicable information that they can use to meet the external requirements may encourage them to get dressed accordingly. Comparatively, amotivation stops youth from evaluating clothing information, especially regarding its relevancy, leading to their loss of attachment to the information they expose to. As a consequence, youth's intent to follow the clothing trends promoted in the digital information decreases, which slightly strengthens the restraining effect of amotivation on behaviour.

Taken together, this study was able to unravel the important roles of all major OCT practices in altering the process of youth's motivational characteristics transferring into the subsequent behavioural intentions. Nevertheless, these mediating effects were found to vary across different OCT practices and motivation types. Comparatively, OCT-relevancy serves as the most influential mediator and amotivation as the most accessible antecedent factor.

7. Implications for research and practices

The findings of this study have several important theoretical, empirical, and practical implications. Theoretically, the central contribution lies in the construction of conceptual frameworks for clothing motivation and OCT for digital clothing information. Extending from generic to domain-specific concepts enables scholars to probe into the characteristics and influences of youth's complex mental processes regarding a certain real-life issue. In addition, by identifying the co-occurrence of multiple psychological factors as well as their interactive effects on subsequent behaviour, this study reveals the importance of an integrative approach to the research on youth's cognitive and affective functioning. Empirically, this study provides the first attempt to measure youth's clothing motivation and

OCT for digital clothing information. The scales that were validated in this study can be used in future studies on the same topics or reviewed as a reference to develop more domain-specific instruments. Practically, this study offers new insights into our understanding of how youth's cognitive resources interactively determine the subsequent behaviour in the face of the massive digital information on clothing and fashion. In this study, no standpoint is made on the "right and wrong" of each clothing motivation and OCT practice. Therefore, it would be of no meaning to think of designing any intervention to manipulate youth's cognitive process for "better" outcomes. Instead, with the present findings, this study is aimed at empowering youth themselves through a better understanding of their own cognitive functioning against the ambiguous and segmented information, polarizing ideas, and algorithmic biases embedded in the massive content on social media. In this vein, it is recommended that educational practitioners use these findings as guidance to assist youth to proactively and systematically practice their OCT abilities on fashion-related information while well acknowledging the consequences of these actions to their subsequent clothing behaviour.

8. Limitations and future directions

Despite the aforementioned implications, this study includes some limitations that nonetheless open up promising avenues for future youth studies. Firstly, many empirical data for correlation and mediation analyses were collected by the scales developed and validated in the present study, as a result of the lack of existing instruments on the according issues. Future research is therefore needed to further examine the psychometric properties of these scales (e.g., measurement invariance between groups and over time) and check their generalizability and transferability across contexts. Secondly, the exclusive use of self-report measures in this study may bring about some concerns such as social desirability bias, self-evaluation bias, and common-method variance. Future studies can employ more measurement types (e.g., OCT tests, fieldwork observation, focus group interviews) and widen the scope of research to include other perspectives (e.g., peers, parents, teachers). Thirdly, this cross-sectional study fails to provide evidence for causality inference. Whether clothing motivation determines the implementation of OCT practices or the other way around (or both) remains unclear. It is suggested that some longitudinal studies be done in the future following this research line, exploring the dynamic characteristics of these youth factors and unraveling the causal relationships among them.

References

- Abidin, C. (2016). Visibility labour: Engaging with Influencers' fashion brands and #OOTD advertorial campaigns on Instagram. *Media International Australia*, 161(1), 86-100. <https://doi.org/10.1177/1329878x16665177>
- Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, 27, 1-13. <https://doi.org/10.1016/j.iheduc.2015.04.007>
- Browne, G. J., Pitts, M. G., & Wetherbe, J. C. (2007). Cognitive stopping rules for terminating information search in online tasks. *MIS quarterly*, 89-104. <https://doi.org/10.2307/25148782>
- Cooke, N. A. (2017). Posttruth, truthiness, and alternative facts: Information behavior and critical information consumption for a new age. *The library quarterly*, 87(3), 211-221. <https://doi.org/10.1086/692298>
- De Neys, W. (2006). Automatic-heuristic and executive-analytic processing during reasoning: Chronometric and dual-task considerations. *Quarterly journal of experimental psychology*, 59(6), 1070-1100. <https://doi.org/10.1080/02724980543000123>
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of research in personality*, 19(2), 109-134. [https://doi.org/10.1016/0092-6566\(85\)90023-6](https://doi.org/10.1016/0092-6566(85)90023-6)
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality.
- Flanagin, A. J., & Metzger, M. J. (2008). *Digital media and youth: Unparalleled opportunity and unprecedented responsibility* (pp. 5-27). MacArthur Foundation Digital Media and Learning Initiative.
- Garza, G. (2002). The internet, narrative, and subjectivity. *Journal of constructivist psychology*, 15(3), 185-203.
- Graham, L., & Metaxas, P. T. (2003). "Of course it's true; I saw it on the Internet!" critical thinking in the Internet era. *Communications of the ACM*, 46(5), 70-75.
- Gurung, R. A., Punke, E., Brickner, M., & Badalamenti, V. (2018). Power and provocativeness: The effects of subtle changes in clothing on perceptions of working women. *The Journal of social psychology*, 158(2), 252-255. <https://doi.org/10.1080/00224545.2017.1331991>

- Güzin, Ş., & ŞENER, B. (2020). Enriching the aesthetics of mobile music player interactions through the use of personal clothing and accessories as interfaces. *METU Journal of the Faculty of Architecture*, 36(2). <https://doi.org/10.4305/metu.jfa.2019.2.3>
- Hagger, M. S., Hardcastle, S., Chater, A., Mallett, C., Pal, S., & Chatzisarantis, N. (2014). Autonomous and controlled motivational regulations for multiple health-related behaviors: between-and within-participants analyses. *Health Psychology and Behavioral Medicine: An Open Access Journal*, 2(1), 565-601. <https://doi.org/10.1080/21642850.2014.912945>
- Halpern, D. F. (2013). Thought and knowledge: An introduction to critical thinking. *Psychology Press*.
- Han, T.-I., & Choi, D. (2019). Fashion Brand Love: Application of a Cognition–Affect–Conation Model. *Social Sciences*, 8(9), 256. <https://doi.org/10.3390/socsci8090256>
- Krathwohl, D. R. (2002). A Revision of Bloom's Taxonomy: An Overview. *Theory Into Practice*, 41(4), 212–218. <https://doi.org/10.2307/1477405>
- Khare, A., Mishra, A., & Parveen, C. (2012). Influence of collective self esteem on fashion clothing involvement among Indian women. *Journal of Fashion Marketing and Management: An International Journal*. <https://doi.org/10.1108/13612021211203023>
- Ku, K. Y. (2009). Assessing students' critical thinking performance: Urging for measurements using multi-response format. *Thinking Skills and Creativity*, 4(1), 70-76. <https://doi.org/10.1016/j.tsc.2009.02.001>
- Ku, K. Y., Kong, Q., Song, Y., Deng, L., Kang, Y., & Hu, A. (2019). What predicts adolescents' critical thinking about real-life news? The roles of social media news consumption and news media literacy. *Thinking Skills and Creativity*, 33, 100570.
- Kwon, Y.-H. (1988). Effects of situational and individual influences on the selection of daily clothing. *Clothing and Textiles Research Journal*, 6(4), 6-12. <https://doi.org/10.1177/0887302x8800600402>
- Lee, D. J.-L., Han, J., Chambourova, D., & Kumar, R. (2017). Identifying fashion accounts in social networks. KDDW on ML meets fashion.
- Liu, O. L., Frankel, L., & Roohr, K. C. (2014). Assessing critical thinking in higher education: Current state and directions for next-generation assessment. *ETS Research Report Series*, 2014(1), 1-23. <https://doi.org/10.1002/ets2.12009>
- Lundy, D. E., Schenkel, M. B., Akrie, T. N., & Walker, A. M. (2010). How important is beauty to you? The development of the Desire for Aesthetics Scale. *Empirical Studies of the Arts*, 28(1), 73-92. <https://doi.org/10.2190/em.28.1.e>
- Mahmoud, A. B., Hack-Polay, D., Grigoriou, N., Mohr, I., & Fuxman, L. (2021). A generational investigation and sentiment and emotion analyses of female fashion brand users on Instagram in sub-Saharan Africa. *Journal of Brand Management*, 28(5), 526-544. <https://doi.org/10.1057/s41262-021-00244-8>
- Metzger, M. J., & Flanagin, A. J. (2013). Credibility and trust of information in online environments: The use of cognitive heuristics. *Journal of pragmatics*, 59, 210-220. <https://doi.org/10.1016/j.pragma.2013.07.012>
- Metzger, M. J., Flanagin, A. J., & Medders, R. B. (2010). Social and heuristic approaches to credibility evaluation online. *Journal of Communication*, 60(3), 413-439. <https://doi.org/10.1111/j.1460-2466.2010.01488.x>
- Mrah, I., & Tizaoui, H. (2018). The Rise of Misinformation in the Digital Age: Moroccan Students' Attitudes and Perceptions of Fake News Online. *Journal of English Language Teaching and Linguistics*, 3(2), 117-135. <https://doi.org/10.21462/jeltl.v3i2.137>
- Ng, N. K.-Y., Chow, P.-S., & Choi, T.-M. (2015). Impacts of social media mediated electronic words of mouth on young consumers' disposal of fashion apparel: a review and proposed model. *Sustainable Fashion Supply Chain Management*, 47-58. https://doi.org/10.1007/978-3-319-12703-3_3
- O'Cass, A., & Siahtiri, V. (2013). In search of status through brands from Western and Asian origins: Examining the changing face of fashion clothing consumption in Chinese young adults. *Journal of Retailing and Consumer Services*, 20(6), 505-515. <https://doi.org/10.1016/j.jretconser.2013.05.005>
- Oh, S., & Nah, K. (2021). Analysis of Fashion Value and Emotion in Digital Environment Based on Analysis of Famous Korean Fashion YouTube Review Data. In *International Conference on Human Interaction and Emerging Technologies* (pp. 240-245). Springer, Cham.
- Paris, P. G. (2002). Critical Thinking and the Use of the Internet as a Resource. *International Education Journal*, 4(1), 30-41.
- Park, K. H. (2014). Cognition, attitude and purchasing experience of SPA brands by types of fashion lifestyle. *Fashion & Textile Research Journal*, 16(4), 604-613.
- Plencner, A. (2014). Critical thinking and the challenges of Internet. *Communication Today*, 5(2), 4-19.
- Reilly, A., & Hawley, J. (2019). Attention deficit fashion. *Fashion, Style & Popular Culture*, 6(1), 85-98.
- Ren, F., Zhang, Q., & Wei, X. (2021). Work Autonomous and Controlled Motivation on Chinese Employees' Work Performance and Innovative Work Behaviour: The Moderating Role of Financial Stress. *Frontiers in psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.676063>
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. *Handbook of self-determination research*, 2, 3-33.
- Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. *Guilford Publications*.
- Son, J., Nam, C., & Diddi, S. (2022). Emotion or Information: What Makes Consumers Communicate about Sustainable Apparel Products on Social Media? *Sustainability*, 14(5), 2849.
- Stanovich, K. E. (2009). Distinguishing the reflective, algorithmic, and autonomous minds: Is it time for a tri-process theory? <https://doi.org/10.1093/acprof:oso/9780199230167.003.0003>
- Stanovich, K. E., & West, R. F. (2000). Individual differences in reasoning: Implications for the rationality debate? *Behavioral and brain sciences*, 23(5), 645-665. <https://doi.org/10.1017/s0140525x00003435>

-
- Sudha, M., & Sheena, K. (2017). Impact of influencers in consumer decision process: the fashion industry. *SCMS Journal of Indian Management*, 14(3), 14-30. <https://doi.org/10.19184/ijl.v1i1.19146>
- Streiner, D. L. (2003). Starting at the beginning: an introduction to coefficient alpha and internal consistency. *Journal of personality assessment*, 80(1), 99-103. https://doi.org/10.1207/s15327752jpa8001_18
- Taljaard, H., & Sonnenberg, N. (2019). Basic psychological needs and self-determined motivation as drivers of voluntary simplistic clothing consumption practices in South Africa. *Sustainability*, 11(13), 3742. <https://doi.org/10.3390/su11133742>
- Textor, C. (2021, November 24). Sex ratio in China in 2020, by age group. *Statista*. Retrieved from <https://www.statista.com/statistics/282119/china-sex-ratio-by-age-group/>
- Wong, D. (2007). Beyond control and rationality: Dewey, aesthetics, motivation, and educative experiences. *Teachers college record*, 109(1), 192-220. <https://doi.org/10.1177/016146810710900101>