

Digital Content Strategy: Detailed Review of the Key Content Components

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Abstract—The modern life of businesses is categorically reliant on their established position online, where digital (and particularly website) content plays a significant role as the first point of information. Digital content, therefore, becomes essential – from making the first impression through to the building and development of client relationships. Despite a number of valuable papers suggesting a strategic approach when dealing with digital data, other sources often do not view or accept the approach to digital content as a holistic or continuous process. Associations are frequently made with merely a one-off marketing campaign or similar. The challenge is in establishing an agreed definition for the notion of Digital Content Strategy (DCS), which currently does not exist, as it is viewed from an excessive number of angles. A strategic approach to content, nonetheless, is required, both practically and contextually. We, therefore, aimed at attempting to identify the key content components, comprising a DCS, to ensure all the aspects were covered and strategically applied – from the company’s understanding of the content value to the ability to display flexibility of content and advances in technology. This conceptual project evaluated existing literature on the topic of DCS and related aspects, using PRISMA Systematic Review Method, Document Analysis, Inclusion and Exclusion Criteria, Scoping Review, Snow-Balling Technique and Thematic Analysis. The data were collected from academic and statistical sources, government and relevant trade publications. Based on the suggestions from academics and trading sources, related to the issues discussed, we revealed the key actions for content creation and attempted to define the notion of DCS. The major finding of the study presented Key Content Components of DCS and can be considered for implementation in a business retail setting.

Keywords—Digital content strategy, digital marketing strategy, key content components, websites.

I. INTRODUCTION

NOTWITHSTANDING the predominant position in the business sector, academically the phenomenon of DCS has hardly been noticed or, possibly, at least poorly presented in the literature. Significant number of papers has been devoted to digital marketing, websites’ success [1]-[7], usability and user experience (UX) [8]-[10]; whereas, the strategic process of achieving successful (more importantly profitable and relationships-building) content is hardly noticeable. Even when mentioned, it does not indicate that the content is valued as a company’s asset, rather being viewed as another marketing technique, despite dominating role of websites as the first point of interaction with a company or enquiry, missing this way the opportunity for engagement with prospective clients.

Meanwhile, potential customers evaluate the company [11]-[13], its financial stability and willingness to share useful

information for free, as digital users are “accustomed to free information” [14, p.64] and associate a high-quality website with the company’s, trustworthiness [15]-[19] and credibility [20]-[23]. Furthermore, even though the aspect is often identified as significant in business, the majority of companies prefer to ignore it or just associate content strategy with marketing strategy and/or one-off or a series of marketing campaigns, which leads to numerous limitations for a company and its business.

It would be easier if an occasional digital visitor returns to the website; however, a single visit could end up there, if this visit was associated with a negative first impression. Moreover, a website evaluation could take from several (7-10) seconds [24] to (50) milliseconds [11]; approximately or 100-160 ms or 130-440 ms maximum for the websites with higher complexity and order [25]. Therefore, the first impression from the website is crucial.

Even if the first burden is taken, there is still a challenge of keeping the targeted audience interested during the first session, and if/when they decide to return to the site. The standards and the substance of the actual content provided should, therefore, be carefully considered as the key reason for the visit.

Modern customers prefer multichannel shopping, using a variety of devices, and their online behaviour significantly fluctuates [26], [27], seeking a variety in service/price, which creates high competition, particularly among the companies with high brand awareness [28], [29]. The users’ expectation bar is being raised with new experiences and a history of using other websites [12].

Furthermore, the perception of digital content and digital behaviour of customers keep changing. From one side, modern companies encounter with the issue of continuously raising demands from digital customers for the better online experience; from the other side, the digital standards, provided by other companies in the market, also keep increasing. Thus, catching up with the best online experiences and technology could be compared to climbing up a mountain, which in turn keeps growing upwards with the speed of a rocket. These circumstances create competition among companies, where digital users expect digital excellency from any company, even though they might have yet experienced it only once. On the other hand, raising demands are neither necessarily reflected in the loyalty of digital users, nor will it indicate this behaviour of any intention by them to make a purchase. At the same time, some companies still dare to provide websites with a dated and cluttered design, where it is hard to find free space among the

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information, which could only be found as “useful” by the software designers and company owners/management teams, not consumers. Companies often present intermittent content on their websites, publishing merely disconnected articles with sporadic regularity. These digital data neither present any (or may possibly slight) interest to the digital readers, nor are they expected on a regular basis, let alone the purpose for these data, which often represent just marketing.

The “majority of the companies do not have any documented content strategy in place” [30]. Evidently, there was a number of attempts in the employment of strategic approach in the areas of enterprise product content strategy [31], medical websites [32], [33], social media [34]-[36], online and publishing [37], visual images [38], mobile phones [39], [40], general application [41], [42] and many more fields. The issue, however, is that viewing content strategy from the area of specialisation (e.g., editors and marketers) through to the actual approach to data management (e.g., as a process, experience, communication, etc.), the notion of DCS (or even content strategy, which DCS is a part of) is not agreeably defined to offer a common (or similar) contextual definition. Different sources provide rather misleading and confusing descriptions, carrying different meanings in a variety of contexts, as the term is immensely confused with other notions [43]. Dependent “on who you are and what you need to do, content strategy can mean a few different things” [44].

II. METHODS

A. Research Tool

The process lasted one year, August 2021 - September 2022.

TABLE I
 ADAPTED SYSTEMATIC ANALYSIS USING PRISMA APPROACH

Nr of results generated from the search	Researched Aspect				
	Content	Content Analysis and Technology	Content Marketing	(Digital) Content Strategy	(Digital) Content Strategy models
Database search	62,514,811	4,556,536	4,752,243	6,289,061	2,709,354
Additional sources	7,890,000	5,770,000	4,310,000	6,500,000	6,390,000
Duplicates removed	4,250,322	1,311,912	20,274	1,947,488	620,888
Screened records	58,264,489	3,244,624	3,022,391	4,341,573	2,088,466
Excluded records	55,887,460	399,524	20,274	2,373,514	1,565,350
Full-text articles	2,377,029	2,845,100	3,002,117	1,968,059	523,116
Excluded full-text articles	2,376,616	2,844,712	3,001,833	1,967,517	523,084
Studies in qual. synthesis	413	388	284	542	32

B. Data Collection

The data were collected for the *scoping review* (Fig. 1) from academic sources and relevant trade publications, as integrative approach generates “new knowledge about the topic reviewed” [58], to include such sources as: ‘ProQuest’ Business database, e-journals and newspapers, ‘ABI INFORM’ e-journals, ‘MINTEL’ and ‘Key Note’ databases, ‘COBRA’ e-books, ‘WARC’ e-journals, ‘YouTube’ online videos of conferences and presentations. We accessed printed and electronically available sources. We emphasise that, when the documents are evaluated, the practical component should be considered as more than containers of text. “Documents serve purposes and have intended audiences, they are created by individuals or

We adopted *preferred reporting items for systematic reviews and meta-analyses (PRISMA)* method and selected document analysis among other qualitative techniques, as it is “used to gather data primarily in the form of words and symbols describing and interpreting constructs of interest” [45, p.6]. In PRISMA, systematic review allowed for collection of the evidence, relevant to the stated criteria to answer a specific research question, using explicit, systematic methods to minimise bias, ensuring reliable results [46], [47]. Although the method could not always be optimal, the overwhelming evidence of researchers using it successfully is apparent [48]-[57]. The process included stages such as: (a) setting precise objectives with an explicit, reproducible methodology; (b) a methodical examination with the intention to find all studies, meeting the eligibility criteria; (c) checking the validity of the results of the included studies, i.e., risk evaluation of potential bias; and (d) systematic presentation and synthesis of the findings (Table I). *Meta-analysis* involved the application of statistical techniques to incorporate and review the findings of included studies [48]. The four-phase flow process included phases such as: ‘Identification’, ‘Screening’, ‘Eligibility’ and ‘Included’. The first phase involved searching databases and other sources to identify relevant records for the review. Then the duplicates were removed; and the records are screened again to exclude the unnecessary ones. The detailed analysis of full-text articles was then conducted to assess the eligibility, some of which were again excluded for various reasons. After the eligibility phase, the included studies were used in qualitative synthesis and meta-analysis [48, pp.2-4].

groups within socio-historic contexts and can be deployed both quantitatively (e.g., content analysis) and qualitatively (e.g., discourse analysis) to become an excellent source of attitudes, social values and societal trends.” [59]

C. Review and Filtering

The materials were reviewed and filtered for their significance to the research, filtered for inclusion/exclusion criteria [60]. The analysis contained peer-reviewed academic articles only; officially acknowledged databases; field-recognised official events (presentations, webinars, seminars and interviews); business and not-for-profit organisations’ websites. The received list was compared with the existing

sources, mentioned as primary by other researchers, adding some of the studies to the list, those either not found by their own search or excluded during initial reviews. We also scanned the references mentioned in the most relevant sources, using the “Snow-Balling” technique [61] to ensure other potential primary studies were included.

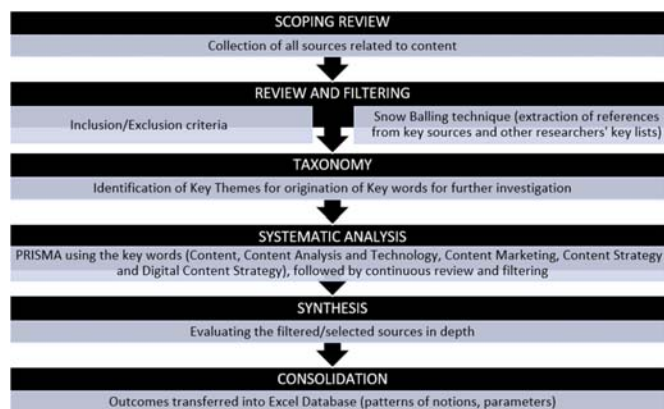


Fig. 1 Scoping Review Process

D. Consolidation and Taxonomy

After the initial familiarisation, the received data were then consolidated into a database and researched closely, extracting the data required for scrutiny. *Thematic Analysis* was further applied for more comprehensive understanding of the phenomena and providing crucial insights of “what is known”, underpinning the research strategy and design [62, p.6]. This analysis ensured the description of researched phenomenon via pinpointing, examining and recording “themes” or patterns in the collected data [63].

E. Synthesis

Familiarising with the collected data, prudently reading each source to validate “all the challenges/practices” used to shape the initial ideas for analysis [63], [60], had been followed by generation of codes/taxonomy to identify the keywords with reference to the context of discussion. The next step was identification of themes, using the codes (e.g., content analysis, content management system etc.). The themes were then thoroughly analysed and defined with allocation of codes to them.

III. KEY ACTIONS FOR CONTENT CREATION

Considering content creation process, we highly recommend Content Strategists to include the following key actions, when creating a piece of content, i.e., (1) clarification of the reason for creation; (2) searching for similar existing data; (3) specifying content marketing details; (4) agreeing the visuals; (5) listing of technical requirements; (6) assigning roles and responsibilities; (7) aligning with content calendar; (8) checking suitability; (9) considering content re-use and lifecycle; (10) developing SEO and keywords; (11) ensuring timely delivery of this content; (12) updating inventory (unless automatic); (13) ensuring maintenance (review, update and archiving); (14) evaluation and measurement; (15) internal and external review (Table II).

The outcomes of this research work allowed the researchers to insist on the application of strategic approach to content planning, creation and management, evaluating a number of key content components, comprising the DCS, to ensure the process, being continuous and holistic, covering all the relevant aspects.

TABLE II
KEY ACTIONS FOR CONTENT CREATION

Nr	Key Actions	Details
(1)	Clarification of the reason for creation	Clarify the reason(s) for content creation (if there is the need and to avoid duplication)
(2)	Searching for similar existing data	Identify what content already exists in relation to the required one (to re-use or to add, ensuring the symbiosis)
(3)	Specifying content marketing details	Specify the audiences, channels, location, timings, key words for search/UGC, set measurements for the outcome and expectations
(4)	Agreeing the visuals	Making sure this piece of content is in unison with the rest of the website, together with some infographics, images, videos etc. required
(5)	Listing of technical requirements	List all the technical requirements for each piece of content for displaying and actions by digital users, if required (visuals, links etc.)
(6)	Assigning roles and responsibilities	Assign the responsibilities for this content (creator, publisher, amender, authoriser etc.)
(7)	Aligning with content calendar	Ensure this piece of content is created in accordance with the planned calendar
(8)	Checking suitability	Check its suitability (in terms of various factors – from basic editorial, substance and structure to company’s strategy and technology)
(9)	Considering content re-use and lifecycle	Consider content re-use (see points 1-3) and potential modifications, e.g., context, technology, channels etc., as well as the whole lifecycle
(10)	Developing SEO and keywords	Develop keywords for the search engine optimisation (SEO)
(11)	Timely delivery of this content	Ensure this content is published, in the right place and at the right time
(12)	Updating inventory (unless automatic)	Update the content inventory: content name, location, direct link, description and dates (unless the system does it automatically)
(13)	Maintenance (review, update and archiving)	Ensure this content is maintained (set up the timing for review and removal/archiving)
(14)	Evaluation and measurement	Evaluate this content (using set up measurements), UX and report to the team/stakeholders
(15)	Internal and external review	Review this piece of content (internally and via user research)

IV. KEY SUGGESTIONS FROM ACADEMICS AND PROFESSIONAL FIELD EXPERTS

Despite the significance of DCS, there is at present a little evidence that companies in the UK (or globally) are DCS-based. Contrariwise, companies merely base their digital content on the organic publishing, barely using strategic approach. Insincere marketing messages are currently dominating websites in the notorious homogeneity; whereas, even modern teenagers are quite aware of marketing tricks and techniques, as digital users "...want real, authentic offerings from transparent and honest sources" [64], [65, p.4]. Thus, the approach to digital content (most likely and at the very least) has to be reconsidered.

1. Foundation Content Components

First and foremost, it is necessary to highlight that basic existence online is possible. This way, some companies merely manage to register online, opening their websites, and have some elementary actions, relevant to content, such as: *planning and creation* of content, which is usually happening only once (e.g., writing a description of a product or service), assigning products and services to a particular *category*, with approximate identification of *targeted audience*, labelling or *taxonomy*, and, finally, using basic *tracking/conversion leads* (e.g., track the page visits and the time spent on the website). In this case, their digital approach to content, nonetheless, is primitive; therefore, the outcomes from the content are limited, whether this relates to the basic selling of products/services or even has further implications on the strategic position for the company. These content components ensure online existence, not more; therefore, it is highly recommended to develop further actions and strategy to achieve the desired financial future.

2. Technology Content Components

Modern digital users are surrounded by the ineluctable need in the internet and gadgets, as well as finding themselves using several devices simultaneously on the regular basis [40], [66], particularly Generation 'X', 'Y' and 'Z', who acquired first mobiles when being an adolescent or even earlier [67], [68]. Hence, the content is expected to be device-flexible, specifically on mobile phones [39], [69]-[72], the number of which continue raising – from 4.9 billion in 2018 to (expected) 6.7 in 2023, with 8.7 billion handheld or personal mobile-ready devices [73, p.10]. Practitioners also advise for the content layout to be flexible, fluid and responsive [74, p.41], [75, p.108], [40]. Scholars insisted "many online ventures have failed not because of the products that are being sold on the website, but due to the poor design of the website itself" [76, p.472]. Internal system has to manage these expectations; whereas, organisations often do not build in-house *content management system (CMS)*, despite numerous suggestions (independency and bespoke design) [77]-[79], as only a few companies have the resources [79]. Practitioners also insist on the system to be flexible for non-technical users and provide an inventory (compulsory for content audit), recording all the relevant data for each piece of content. In terms of *SEO (search engine optimisation)*, companies nowadays use external

assistance in order to build or get suggestions on the keyword search. It is also vital for SEO to be adapted to the prospective customers way of searching for a product/service/problem-solving solution.

The absence of (non-agreed or inactive) content-related *processes/procedures* and/or *roles/responsibilities* within an organisation, despite recommendations from professionals [41], make the attitude and publishing processes hectic, spontaneous, disconnected and reactive. Content Strategists, nonetheless, stress that "Content Strategy is not about technology. It is – how people can work together" [40], as defining "ownership and roles", as well as having vibrant and official processes/procedures is essential to know the key stages and what is expected from everyone [37], [44].

As the crucial part of *information architecture (IA)*, *navigation* assists content in being easily and logically discovered [16], [80]-[82], [75], being positioned no more than two-three clicks away [10, p.11]. "Well structured content leads to more opportunities for reuse across product lines, audiences, and information products", and also "to greater return on investment", which ensures consistency and effectiveness [83, p.380]. Researchers emphasise structuring content, introducing taxonomy/labelling, navigation, organisation and search [84] with the need for direct investments to IA [85], [69] to display the latest technology.

Investment in technology is, undoubtedly, the key, as "The information should be found and be accessible" [83, p.5], especially digital [41, p.57], [37], [40]. Academics also insist on discovering user abilities and their requirements [33], [70], [86]-[88], developing website content and design [89]-[92], [19], [79], website management systems and models [93], [79], and, particularly, *analytical reviews* and website success metrics [94]-[99] with regular reporting and external/internal benchmarks [44]. Researchers, however, still agree that the content is far more crucial than technology [12], as this is what the digital user is coming for in the first place [44], and even though the design is still the second, it is coming close in significance [100].

3. Marketing Content Components

A number of authors [101]-[104] agree that content marketing is devoted to producing quality content that is "unique, significant, valuable, dynamic and more relevant than its competitors" and introducing the following three pillars, characterising *content marketing*: contents, customers' engagement and goals [99, p.96]. The key approach is in the overall marketing view about the meaning of what is attempted to communicate, separate from the actual physical form [105], considering external *media channels*, frequency of publications and consistency in messages across them [12]. Key industry specialists insist on "clean, well-structured base of content to work from", i.e., "PODE (Publish Once and Distribute Everywhere)" [106]. Overall, it is essential to know the audience, as "Authors know their subject. Editors specialize in knowing the audience" [107, p.25].

When evaluating own financial position, companies find regular *research* as unnecessary and expensive practice,

making it impossible to follow dynamic market changes, client needs and the best way of presenting this data; whereas, research always brings unexpected and valuable results. Furthermore, researchers recommend involving users via *co-creation* and *user generated content (UGC)* [37], being focused on the customer's need for information and content contribution, strategically identifying "which content is served up, to whom, and when" [12].

As customers, for instance, "Millennials are digitally savvy and connected, emphasis on the online experience is crucial for engagement and can make the difference" [108], *usability* of a website has a dramatic impact for them; hence, website users' ability could be significantly improved, if companies provided "right" information on their websites [19, p.28]. A "simple, usable Web site would be perceived as more credible than a site that has extravagant features but is lacking in usability" [16, p.67]. Although not always affordable [10], *usability and UX (UX)* tests are highly recommended [109]-[113], including "what people do most often on their mobile devices" and "what they're intending to do on any specific visit", as "devices get more powerful and cheaper" [39, loc 73].

Gamification as an entertainment and attainment of positive associations, brings motivational aspects and a sense of discovery, when dealing with this content. Practitioners from 'BBC' R&D, for example, noticed direct correlation between entertaining/playful content and the perception of this website as being engaging, even when the interaction was not "quite right", for instance participants prefer watching a video with a skip option and a news topic with both sides of opinions, using videos [114]. *Gamification* as an additional stimulus for an enriched shopping experience and boosted engagement heavily relates on electronic innovations [115], where an integration into various applications has already been effectively applied in education, healthcare, retail and entertainment [116]. According to 'Statista', only the VR (virtual reality) market, for instance, is expected to grow from less than five US Billion Dollars to more than twelve within a three-year period, i.e., 2021-2024 [117], and global annual growth is expected to reach fifteen per cent from 2022 to 2030 [118]. Contempt the diverse opportunities, the VR implementation in retail has been slow [119], [120]. Research, nonetheless, suggests adopting this creative personalised innovation to endure market competition [115], [121] as one of a few. Other digital features for the visual and entertaining experience could also be considered.

4. Content Substance Components

The empowering of the website role provides an excellent venue for building a relationship with prospective clients as an atypical marketing scenario, creating the reasons for prospective clients "to return regularly, thereby fostering a sense of loyalty and strengthening the relationship" between the company and its customers via a dialogue with prospective clients [9, p.51].

Formatting (grammar and aesthetics) are other aspects to consider. "Even one typographical error or a single broken link is damaging" [16, pp.67-68]. "Visual complexity and order" highly influence users' first impressions of webpages, which

identifies potential customers' attitudes and subsequent behaviours [25, p.1345]. Research suggests prioritising appearance and consistency of aesthetics in the mobile-application design, as it impacts users' emotions [122, p.1081], and "users' first impression is significantly affected by the differences in aesthetics but marginally influenced by the difference in perceived usability" [123, p.870].

There will always be a dilemma in proportional presentation online, where some content remains almost unchanged (reputation/brand-sensitive information, recognisable features and the skeleton of content) and the other content provides dynamic material (active market position, entertaining and useful content). This live data reaches out to prospective customers, builds new and developing existing relationships via sharing values, information about products/company and is otherwise useful to clients. If the live data are omitted or only present on social media, this would significantly limit the intended reach. Another dilemma is in the proportional presentation of facts/statistical data with business/product-relevant content. The former assists prospective clients in companies' evaluation among the competitors; whereas the latter (if creative and substantial for the readers' needs/interests) equally contributes to the website's usefulness and, therefore, selection of this company. "Opportunities and rewards... increasingly will be the product of creative thinking and thoughtful planning, not good fortune." [124, p.3]

Designing also differs for various devices, as the colour salience and location of a website link are visually perceived differently by the mobile and PC users, where the colour attracts "users' attention and increase users' sense of control over the process" [125, p.547]. Already in 2001, Fogg et al. insisted that sites have to be arranged in a way that makes sense to customers, deducting credibility points for ease-of-use problems [16, p.67]. Modern users do not have time or desire to look for information, if the company does not provide it, it is hard to find or it is poorly presented/expressed, users will leave to find it elsewhere.

Researchers and practitioners [41], [37], [74], [75], [126] agree on the overall importance of the actual content over navigation, as users "want answers to their needs and not your site map" [75, p.52]. It is suggested to use a story, where possible, as one of the easiest content-perceived ways [127], high-quality, client-focused, relevant, timely and *engaging content* [37], [44]. The aspect of "completeness of content" has also received an immense scholars' discussion, among other factors [4], [5], [15], [19], [128]-[130]; although earlier research [131] did not identify the correlation between the website information quantity and website popularity. Later, however, in the information comprehensiveness became the first or second most important element [129, pp.85-86].

Apart from getting initial attention from the basic triggering in the headlines, it is necessary to consider the actual *substance* of the articles. Companies, nevertheless, often ignore or just simply are not aware of the topics, which could indicate high interest from the targeted audience, thus not suggesting any relevant topics or substantial quality content to the readers during their first visit, let alone to those, who are returning to

the site. This behaviour indicates no intention from companies to develop existing and to build prospective customer relationships via creating an interest, although academics state that this is essential [132]. Content limitations could also lead to the boring and standard content dominating the site. It is certainly useful to have some expected content, though *creativity* is still highly valued and required. Prospective clients do not have time or desire for discovering company's excellence if their website looks the same as any other. One of the limitations would be in the absence of both video options (shorter and detailed) or even hardly having any videos at all. Many universities, for instance, do not provide thought-provoking articles with substantial content, which would not only be interesting to read for the digital users, but also to share with their families and friends. Andersen and Batova stated that web content requires multiple formats and consistency in messages [58, p.254]. Visual aspect is crucial for engagement, as human perception is recognised to be mostly visual, where 95% of the business-to-business clients favour optimised content, short, visual and mobile [72], [133]. It is "visual appeal and entertainment" offered by a company as "Playfulness is the intrinsic reaction towards the shopping activities that a customer engages in" [134, p.274]. Digital users prefer seeing information in shorter text though in more visual content [72]. Pictures are easier to understand, beyond the linguistic and cultural barriers, and more likely to be shared, as it is "eye-catching and has a direct effect on human emotions" [133, p.89]. Prospective students, for instance, like watching videos on the university's webpages to get a real feel for what it might be like to study at this university [135], as well as realistic photography and 360-degree images [104]. Thus, engaging Generation 'Z', for example, could be via the use of highly visual ad formats, such as full-screen interstitials, in-app categories like arts and entertainment, hobbies/interests, sports, style/fashion, food/drink, shopping and travel [66]. Recent tendency is in offering the readers two options of videos, as apparently readers would watch longer videos, if the subject is interesting to them. Furthermore, the content could be presented in a sequence of series, published during regular periods, leading towards a particular action or idea. Numerous UK companies also replaced some long unreadable legal pages with plain language, as highly advised by professionals, demonstrating respect to their customers [37, p.11]. Creative but planned approach could be in devoting one of the content series to useful information, related to the companies' products/services, using relevant equipment and the industry itself, including calendars and events. Modern digital visitors expect free access to digital sources [14] and often expect companies provide free advice. "Expertise is a key component in credibility" [16, p.67]; therefore, this marketing behaviour creates content assets for the company, positioning them above the competitors as a *field expert*. It is essential, nonetheless, not to be excessively persuasive in advising own products, as the neutral position appears to subtly create two significant points in the customer's mind: (1) there is a choice and (2) the choice is mine, providing a sense of client's control in the given situation, which would, most likely, lead them to selecting the

company expert. It is worth presenting information as new or at least in a new way, particularly for adolescents, to make it more valuable and worth reading. The other content series could inform users on the company's brand values and history, creating positive associations, including non-business-related, environment and community-related activities, which the customer would wish to relate to themselves. The choice of activities would empower more followers, when the findings are based on the research of particular targeted audiences, i.e., their interests, beliefs and aspirations. Alternative way of presenting content could also bring highly successful results, e.g., as the "Don't go to Bradford [*City/University*]" video, aimed at addressing the negatives about Bradford. The analytics indicated over one-hundred-and-ten-thousand views to the rise of 13% in clearing applications and the rise of 90% in the following October Open Day attendance [136]. The creativity of the content could also be found in new ways of communicating marketing ideas. At the Higher Education Marketing Conference in 2018, the University of Reading reported that they have been "transforming HE marketing by telling stories". To achieve the target, the university created a toolkit, allowing for collateral (print and digital) to be created in a consistent manner, i.e., using set of templates, which academics can input to. There was also an image bank, created for each school, where the only images allowed were contemporary (academic photos) with the use of more infographics. Reading University has also gone into partnership with the "Reading Festival", which allows twelve students to be present to create footage/content [137]. The approach is also supported by Content Marketing Institute [30].

Overall, researchers emphasise on the continuous content development, in accordance with the new market requirements. The content still "Remains the King", although the format could be changing, i.e., context, length, with key influencers' involvement etc. The stress is on the "In-house" content production and the encouragement of customer involvement ("Airbnb", for instance, has successfully used this practice) and "sharing ideas" [71, p.58].

5. Strategic Content Components

At higher level, companies would consider such things as *content lifecycle* and *information re-use*, for every piece of content. Web content often undergoes numerous changes, as it "has great potential for reuse" [58, p.254], where consideration is given not only to the lifetime of each individual content, its creation, publishing, updates and removal, but also to the opportunities for re-use of the content, possibly re-written for different audiences, in different format or even on different media platforms. If either of these aspects have not yet been considered, then *content audit* is there to take place. Researchers suggest conducting it even prior to introducing a new CMS, as it "...is an accounting of the information" and is expected to save "money if your findings implemented". "The purpose of content audit is to analyse how content is used, reused, and delivered to its various audiences." The aim is to unify the content and the "process to create it and "eliminate the "cut and paste" method... wherever possible" [83, p.104].

Strategic publishing involves the new way of thinking about the *value* and the use of content [40].

Content Strategists should consider the purpose for each piece of content, as it should lead to an action, whether this would be just (a) adding this company/business or product/service into customer's first evoked list in the relevant category of products, (b) purchasing decision or (c) any other.

Practitioners should also consider the need for a new piece of content [138] and the usefulness of it to the potential clients (not the company), as well as to avoid duplication [83], as despite the dated belief that online publishing is free, Content Strategists realised that content audits (which are expected to be regular) and preparation of high-quality materials are quite expensive processes [83], [138].

Distinguishing companies within one field is often hard among "a homogenized presentation" [124, p.5]; therefore, using creative approach in presentation/technology/substantial content is essential, where publishing is strategically planned. Content creation process has to be holistic and continuous, not achieved via interruption campaigns, which is easier than delivering useful and valuable content [139]. Thus, expert Content Strategists recommend investing in a *content calendar* [37, p.45], which covers advanced planning of content [37, p.21] and "keeps everyone on task and on the same page, which ultimately saves time, money, and heartache" [44, loc 2173]. The *publishing regularity* is equally significant and could be achieved via consistent delivery of content, building up trust in the minds of digital users, anticipating new articles and creating positive affiliation with the company/product/service [140].

The *tone of voice* (or voice and tone), identified as the online experience aspect [41, p.55], [37, p.45-46, 60], [44], is, regrettably, often based on sales, rather than via the adoption of a conversational style. This is particularly relevant to adolescents, i.e., finding the right approach to the technology-savvy, though technology-dependent generation, who often find themselves in the continuous FOMO (fear of missing out) position and does not waste time, avoiding unnecessary digital activities [67]. This generation also values mobile designs, as according to the 'Pew Research Center', the majority of

adolescents of this age range own a mobile phone. In the USA, for instance, this constitutes 95% of those aged 13-17 years [141]-[143], using internet extensively, 89% reported using it via a mobile device almost constantly or several times a day [144]. Consequently, the needs' and preferences' research is valuable to achieve the desired *brand image* and market position.

It is vital to consider the likelihood of prospective customers' remaining on the website, if the digital users might just visit this site in passing (as one of the many), when the site is presented in a customer-unfriendly way, i.e., overloaded with large chunks of text, no videos or audio podcasts, not even infographics to make the life of a digital reader any easier, e.g., by providing links to other websites on the same topic [145]. Recent research recommends "to induce positive first impressions, designers should adopt well-ordered webpages for attracting users' attention and low-complexity webpages for inducing positive emotional responses" [25, p.1345].

V. DEFINITION AND THE KEY CONTENT COMPONENTS OF DCS

We summarised that the term *DCS* could be defined as:

A holistic and continuous process, created to strategic level for the planned availability of carefully selected digital content, with a view to meeting user and business goals via creative, relevant, useful, engaging, timely and regularly published content, considering key Strategic, Content, Marketing, Technology and Foundation content components.

The key content components discussed above could be summarised in Table III (where the researchers used the framework, presented in 2019 [43] as a basis), the details of which could be discussed in additional paper.

VI. CONCLUSION

The approach to content should be holistic and continuous; therefore, the application of DCS is essential, considering the key content components – Strategic, Content, Marketing, Technology and Foundation.



Fig. 2 Key Content Components of Digital Content Strategy (DCS)

REFERENCES

- [1] Fay, M. and Currier, G., 1994. The rise and fall of the copy point: the changing information content of print advertisements from 1953-1988. *European Journal of Marketing*, 28(10), 19-31.
- [2] Huizingh, E.K., 2000. The content and design of web sites: an empirical study. *Information and Management*, 37(3), 123-134.
- [3] Liu, C. and Arnett, K.P., 2000. Exploring the factors associated with web site success in the context of electronic commerce. *Information and Management*, 38(1), 23-33.
- [4] Ranganathan, C. and Ganapathy, S., 2002. Key dimensions of business-to-consumer web sites. *Information & Management*, 39(6), 457-465.
- [5] Ahn, T., Ryu, S. and Han, I., 2007. The impact of web quality and playfulness on user acceptance of online retailing. *Information and Management*, 44, 263-275.
- [6] Gregg, D.G. and Walczak, S., 2008. Dressing your online auction business for success: An experiment comparing two eBay businesses. *MIS Quarterly*, 653-670.
- [7] Shandasani, P.N., Mukherjee, A. and Malhotra, N., 2008. Antecedents and Consequences of Service Quality in Consumer Evaluation of Self-Service Internet Technologies. *Service Industries Journal*, 28(1), 117-138.
- [8] Hassan, S. and Li, F., 2007. Evaluating the usability and content usefulness of web sites: a benchmarking approach. *Journal of Electronic Commerce in Organizations (JECO)*, 3(2), 46-67.
- [9] Pegoraro, A., 2006. Using University Websites for Student Recruitment: A Study of Canadian University Home Pages Examining Relationship Marketing Tactics and Website Usability. PhD Dissertation, The University of Nebraska, USA.
- [10] Krug, S., 2014. Don't make me think. Revisited: A Common-Sense Approach to Web and (and Mobile) Usability. USA: New Riders.
- [11] Lindgaard, G., Fernandes, G., Dudek, C. and Brown, J., 2006. Attention web designers: You have 50 milliseconds to make a good first impression!. *Behaviour & information technology*, 25(2), 115-126.
- [12] Bailie, R.A. and Urbina, N., 2013. Content Strategy: Connecting the dots between business, brand, and benefits. London: XML Press.
- [13] Patel, N., 2014. Great Expectations: 47% of Consumers Want a Web Page to Load in Two Seconds or Less. In: *Wired: Innovation Insights (New thinking for new era) weblog*, 5 June 2014 (accessed 16 September 2022). Available from: <http://insights.wired.com/profiles/blogs/47-of-consumers-expect-a-web-page-to-load-in-2-seconds-or-less#axzz4xfclFhHM>.
- [14] Swatman, P.M., Krueger, C. and Van der Beek, K., 2006. The changing digital content landscape: an evaluation of e-business model development in European online news and music. *Internet Research*, 16(1), 53-80.
- [15] Barnes, S.J. and Vidgen, R.T., 2001. An evaluation of cyber-bookshops: the WebQual method. *International Journal of Electronic Commerce*, 6(1), 11-30.
- [16] Fogg, B.J., Marshall, J., Laraki, O., Osipovich, A., Varma, C., Fang, N., Paul, J., Rangnekar, A., Shon, J., Swani, P. and Treinen, M., 2001. What makes Web sites credible? A report on a large quantitative study. In *Proceedings of the SIGCHI conference on Human factors in computing systems*, ACM, March, 61-68.
- [17] Kim, S. and Stoel, L., 2004. Apparel retailers: Website quality dimensions and satisfaction. *Journal of Retailing and Consumer Services*, 11(2), 109-117.
- [18] Park, J., Lennon, S.J. and Stoel, L., 2005. On-line product presentation: Effects on mood, perceived risk, and purchase intention. *Psychology and Marketing*, 22(9), 695-719.
- [19] Hasley, J.P. and Gregg, D.G., 2010. An Exploratory Study of Website Information Content. *Journal of Theoretical and Applied Electronic Commerce Research*, 5(3).
- [20] Flanagan, A.J. and Metzger, M.J., 2000. Perceptions of Internet information credibility. *Journalism & mass communication quarterly*, 77(3), 515-540.
- [21] Fogg, B.J., 2003, April. Prominence-interpretation theory: Explaining how people assess credibility online. In *CHI'03 extended abstracts on human factors in computing systems*, 722-723.
- [22] Choi, W. and Stvilia, B., 2015. Web credibility assessment: Conceptualization, operationalization, variability, and models. *Journal of the Association for Information Science & Technology*, 66(12), 2399-2414.
- [23] Bhuiyan, M.M., Zhang, A.X., Sehat, C.M. and Mitra, T., 2020. Investigating differences in crowdsourced news credibility assessment: Raters, tasks, and expert criteria. *Proceedings of the ACM on Human-Computer Interaction*, 4(CSCW2), 1-26.
- [24] Clayton, M., 2003. Speed-selecting a college. *Content Strategy. Student Recruitment*. In: *The Christian Science Monitor weblog*, 7 October 2003 (accessed 11 September 2022). Available from: csmonitor.com/2003/1007/p13s02-lehl.htm.
- [25] Liu, W., Cao, Y. and Proctor, R.W., 2022. The roles of visual complexity and order in first impressions of webpages: an ERP study of webpage rapid evaluation. *International Journal of Human-Computer Interaction*, 38(14), 1345-1358.
- [26] Scarano, G., 2018. Why Retailers Are Under Increasing Pressure to Improve the Brand Experience. *Sourcing Journal*, New York, 3(15).
- [27] Kingsnorth, S., 2022. Digital marketing strategy: an integrated approach to online marketing. Kogan Page Publishers.
- [28] Roll, O. and Pfeiffer, E., 2017. Are your consumers variety seekers? The moderating impact on the effectiveness of free gift promotions vs. price discounts. *The International Review of Retail, Distribution and Consumer Research*, 27(4), 352-368.
- [29] Liyang, X., Honglei, Y. and Wang, Z., 2021. Competition in a Variety Seeking Market with Brand Name Awareness. *Sage Open*, 11(2).
- [30] Pulizzi, J., 2015. A Marketing Conference: Content Marketing Strategy 2015. In: *YouTube weblog*, 5 November 2015 (YouTube video with) (accessed 21 August 2022). Available from: <https://www.youtube.com/watch?v=0BaSjglvE88>.
- [31] Gollner, J., 2013. Product Content Strategy. In: *Gollner weblog*, 11 October 2013 (accessed 18 May 2022). Available from: <http://www.gollner.ca/2013/10/>.
- [32] Rowell, J.P., Kessler, G.R. and Berke, R., 1999. Five keys to a web site that's more than just a pretty face. *Medical Marketing and Media*, 34 (5), 80-84.
- [33] Lombardi, G., 2012. Maximizing Your Website's Effectiveness with Great Content. *Dental Economics*, (June), 102(6), 75.
- [34] Kozinets, R.V. and Cerone, S., 2014. Between the Suit and the Selfie: Executives' Lessons on the Social "Micro-Celebrity". *GfK Marketing Intelligence Review*, 6(2), Nov, 21.
- [35] Meyer, E.A. and Wachter-Boettcher, S., 2016. Design for real life. New York, NY: A Book Apart.
- [36] Flanzraich, D., 2017. The 'Greatist' Strategy: Derek Flanzraich on Content. Interview with J. Davis. In: *American Marketing Association weblog*, n/m (accessed 15 August 2022). Available from: <https://www.ama.org/publications/MarketingHealthServices/Pages/great-ist-content-strategy-derek-flanzraich.aspx>.
- [37] Kissane, E., 2011. The elements of content strategy. New York, NY: A Book Apart.
- [38] Bell, P., 2001. Content analysis of visual images. *Handbook of visual analysis*. London: Sage Publications, Inc.
- [39] Wachter-Boettcher, S., 2012. Future ready content. In: *A List Apart weblog*, 28 February 2012 (accessed 12 September 2022). Available from: <http://alistapart.com/article/future-ready-content>.
- [40] McGrane, K., 2016. UX Content Strategy w/Karen McGrane. Online Conference. Interview by Jose Caballer. 18 March 2016 (accessed 12 September 2022). Available from: <https://www.youtube.com/watch?v=tlskof89nUw>.
- [41] Halvorson, K. 2010a. Content Strategy for the Web. 1st ed. California: New Riders.
- [42] Redish, J.G., 2012. Letting go of the words: Writing web content that works. 2nd ed. Oxford: Morgan Kaufmann.
- [43] Razina, O., Al-Husban, M., Ross, M. and Ahmad, S., 2019. Digital Content Strategy. Simplicity over Complexity. *International Experiences and Initiatives in IT Quality Management: SQM*, 27, 39-60.
- [44] Halvorson, K. and Rach, M., 2012. Content Strategy for the Web. 2nd ed. New Riders: Berkeley, USA, ebook.
- [45] Stage, F.K. and Manning, K., 2003. Research in the College Context: Approaches and Methods (1st ed.). Abingdon: Routledge.
- [46] Antman, E.M., Lau, J., Kupelnick, B., Mosteller, F. and Chalmers, T.C., 1992. A comparison of results of meta-analyses of randomized control trials and recommendations of clinical experts: treatments for myocardial infarction. *JAMA*, 268(2), 240-248.
- [47] Oxman, A.D. and Guyatt, G.H., 1993. The science of reviewing research. *Annals of the New York Academy of Sciences*, 703(1), 125-134.
- [48] Liberati, A., Altman, D.G., Tetzlaff, J., Mulrow, C., Gøtzsche, P.C., Ioannidis, J.P., Clarke, M., Devereaux, P.J., Kleijnen, J. and Moher, D., 2009. The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies That Evaluate Health Care Interventions: Explanation and Elaboration. *PLoS Medicine*, July, 6(7), 1-28.
- [49] Moher, D., Liberati, A., Tetzlaff, J., Altman, D.G. and PRISMA Group, 2009. Preferred reporting items for systematic reviews and meta-analyses:

- The PRISMA statement. *Annals of internal medicine*, 151(4), 264-269.
- [50] Bastian, H., Glasziou, P. and Chalmers, I., 2010. Seventy-five trials and eleven systematic reviews a day: how will we ever keep up?. *PLoS medicine*, 7(9), e1000326, 1-6.
- [51] Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., Stewart, L.A. and PRISMA-P Group, 2015. Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, 4(1), 1-9.
- [52] Sun, X., Roudi, R., Dai, T., Chen, S., Fan, B., Li, H., Zhou, Y., Zhou, M., Zhu, B., Yin, C. and Li, B., 2019. Immune-related adverse events associated with programmed cell death protein-1 and programmed cell death ligand 1 inhibitors for non-small cell lung cancer: a PRISMA systematic review and meta-analysis. *BMC cancer*, 19(1), 1-13.
- [53] O'Dea, R.E., Lagisz, M., Jennions, M.D., Koricheva, J., Noble, D.W., Parker, T.H., Gurevitch, J., Page, M.J., Stewart, G., Moher, D. and Nakagawa, S., 2021. Preferred reporting items for systematic reviews and meta-analyses in ecology and evolutionary biology: a PRISMA extension. *Biological Reviews*, 96(5), 1695-1722.
- [54] Da Silva, D.C.G., da Cunha, M.D.S.B., de Oliveira Santana, A., dos Santos Alves, A.M. and Santos, M.P. 2022. Malnutrition and nutritional deficiencies in children with cerebral palsy: a systematic review and meta-analysis. *Public Health*, 205, 192-201.
- [55] Regona, M., Yigitcanlar, T., Xia, B. and Li, R.Y.M., 2022. Opportunities and adoption challenges of AI in the construction industry: A PRISMA review. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(1), 45-76.
- [56] Syukri, A., Hatta, M., Amir, M., Rohman, M.S., Mappangara, I., Kaelan, C., Wahyuni, S., Bukhari, A., Junita, A.R., Primaguna, M.R. and Dwiyaniti, R., 2022. Doxorubicin induced immune abnormalities and inflammatory responses via HMGB1, HIF1- α and VEGF pathway in progressive of cardiovascular damage. *Annals of Medicine and Surgery*, 103501.
- [57] Zhao, Y., Bao, W.W., Yang, B.Y., Liang, J.H., Gui, Z.H., Huang, S., Chen, Y.C., Dong, G.H. and Chen, Y.J., 2022. Association between greenspace and blood pressure: A systematic review and meta-analysis. *Science of The Total Environment*, 817, 152513.
- [58] Andersen, R. and Batova, T., 2015. The Current State of Component Content Management: An Integrative Literature Review. *IEE Transactions on Professional Communication*, 58(3), 247.
- [59] Davie, G. and Wyatt, D., 2021. Document Analysis. In: S. ENGLER and M. STAUSBERG, ed. *The Routledge Handbook of Research Methods in the Study of Religion*, 2nd ed. Abingdon-on-Thames: Routledge (Chapter 2.9, 11 pages).
- [60] Zahedi, M., Shahin, M. and Babar, M.A., 2016. A systematic review of knowledge sharing challenges and practices in global software development. *International Journal of Information Management*, 36(6), 995.
- [61] Budgen, D., Turner, M., Brereton, P. and Kitchenham, B.A., 2008. Using mapping studies in software engineering. In *Proceedings of PPIG*, 8, September, 195-204. Lancaster University.
- [62] Boyatzis, R.E., 1998. *Transforming qualitative information: Thematic analysis and code development*. London: Sage Publications.
- [63] Braun, V. and Clarke, V., 2006. *Using thematic analysis in psychology*. *Qualitative research in psychology*, 3(2), 77-101.
- [64] Gilmore, J.H. and Pine, B.J., 2007. *Authenticity: What Consumers Really Want*. Boston MA: Harvard Business School Press.
- [65] Piercy, N.F., 2016. *Market-led strategic change: Transforming the process of going to market*. 5th ed., London: Routledge.
- [66] Fishback, G., 2019. Demographic targeting: How different generations use mobile apps. In: *MarketingDive* weblog. 30 April 2019 (accessed 13 September 2022). Available from: <https://www.marketingdive.com/news/demographic-targeting-how-different-generations-use-mobile-apps/553572/>.
- [67] Google, 2017. *Generation Z_A look inside its mobile-first mindset of teens*. In: *Think with google* weblog. March 2017 (accessed 12 September 2022). Available from: https://storage.googleapis.com/think/docs/Gen_Z_Insights_All_teens.pdf.
- [68] Cisco 2020a. *Connecting with Generation Z. Financial institutions that successfully target Gen Z could win big*. White paper. (accessed 13 September 2022). Available from: https://www.cisco.com/c/dam/en_us/solutions/industries/resources/fsi/cisco-genz-white-paper.pdf.
- [69] Gollner, J., 2010. *Get Smart: Architecting Content for Maximum Value*. *eContent*, 33(10), 18.
- [70] Pendell, K.D. and Bowman, M.S., 2012. *Usability Study of a Library's Mobile Website: An Example from Portland State University*. *Usability Study of a Library's Mobile Website*, 6, 45-62.
- [71] Budikova, J., 2014. *How digital trends are changing the marketing landscape*. Discussion. *Central European Business Review*, 3(2), 57-58.
- [72] Taylor, G., 2014. *B2B Content Preferences Survey: Buyers Want Short, Visual, Mobile-Optimized Content*. In: *DEMAND GEN Report* weblog. 11 June 2014 (accessed 14 September 2022). Available from: <http://www.demandgenreport.com/industry-topics/content-strategies/2746-b2b-content-preferences-survey-buyers-want-short-visual-mobile-optimized-content.html>.
- [73] Cisco 2020b. *Cisco Annual Internet Report (2018-2023)*. Report. White Paper. 9 March 2020 (accessed 11 September 2022). Available from: <https://www.cisco.com/c/en/us/solutions/collateral/executive-perspectives/annual-internet-report/white-paper-c11-741490.pdf>.
- [74] Marcotte, E., 2011. *Responsive Web Design*. New York, NY: A Book Apart.
- [75] Wroblewski, L., 2011. *Mobile First*. New York, NY: A Book Apart.
- [76] Rathi, D. and Given, L.M., 2011. *Designing digital marketplaces for competitive advantage*. In M. Cruz-Cunha, & J. Varajão (Eds.), *E-Business issues, challenges and opportunities for SMEs: Driving competitiveness* (pp. 1-19). Hershey, PA: Business Science Reference, IGI Global Publishing.
- [77] Seadle, M., 2006. *Content Management Systems*. *Library Hi Tech*, 24(1), 5-7.
- [78] Coombs, K., 2008. *Navigating Content Management*. *Library Journal*, 133, 24.
- [79] Black, E.L., 2011. *Selecting a Web Content Management System for an Academic Library Website*. *Information Technology and Libraries*, 30(4), 185-189.
- [80] Rosenfeld, L. and Morville, P., 2006. *Information architecture for the world wide web*, 3rd ed. Cambridge: O'Reilly.
- [81] Garrett, J.J., 2010. *The elements of user experience*, 2nd ed. Berkeley, CA: New Riders Publishing.
- [82] Ruzza, M., Tiozzo, B., Mantovani, C., D'Este, F. and Ravarotto, L., 2017. *Designing the information architecture of a complex website: A strategy based on news content and faceted classification*. *International Journal of Information Management*, 37, 166-176.
- [83] Rockley, A., Kostur, P. and Manning, S., 2003. *Managing Enterprise Content: A Unified Content Strategy*. London: New Riders.
- [84] Morville, P. and Rosenfeld, L., 2006. *Information architecture for the World Wide Web*, 3rd ed. Sebastopol, CA: O'Reilly.
- [85] Evernden, R. and Evernden, E., 2003. *Information first: Integrating knowledge and information architecture for business advantage*. Oxford: Butterworth-Heinemann.
- [86] Elling, S., Lentz, L. and De Jong, M.D., 2012. *Users' abilities to review Web site pages*. *Journal of business and technical communication*, 26(2), 171-201.
- [87] Roy, D., 2014. *Website analysis as a tool for task-based language learning and higher order thinking in an EFL context*. *Computer Assisted Language Learning*, 27(5), 395-421.
- [88] Roy, D. and Crabbe, S., 2015. *Website analysis in an EFL context: content comprehension, perceptions on web usability and awareness of reading strategies*. *ReCALL*, 27(2), May, 131-155.
- [89] Shelstad, M., 2005. *Content matters: analysis of a website redesign*. *OCLC Systems & Services: International digital library perspectives*, 21(3), 209-225.
- [90] Miller, R., 2008. *How much is Your Content Worth?* *EContent*, 31(2), 38-42.
- [91] Kastner, M. and Stangl, B., 2012. *Mapping segments accessing user-generated content and website applications in a joint space*. *International Journal of Culture, Tourism and Hospitality Research*, 6(4), 389-404.
- [92] Messmer, E., 2013. *'Content spoofing' a major website vulnerability, study finds*. In: *Network World* weblog. 2 May 2013 (accessed 14 September 2022). Available from: <http://www.networkworld.com/article/2165851/security/-content-spoofing--a-major-website-vulnerability--study-finds.html>.
- [93] Kittle, B. and Ciba, D., 1999. *Relationship marketing in higher education via the World Wide Web: a study of home pages examining student retention strategies*. In *Proceedings of the 1998 Symposium for the Marketing of Higher Education*. American Marketing Association, Chicago, 165-175.
- [94] Chaffey, D., Ellis-Chadwick, F., Mayer, R. and Johnston, K., 2000. *Internet marketing*. Edinburgh: Pearson Education.
- [95] Agrawal, V., Arjona, L.D. and Lemmens, R., 2001. *E-performance: The path to rational exuberance*. *The McKinsey Quarterly*. Academic OneFile, Winter, 31.

- [96] Marcus, J., 2004. Amazonia. Five Years at the Epicentre of the Dot-com Juggernaut. New York, NY: The New Press.
- [97] Andrykovich, K., Wisniewski, E. and Swift, M.S., 2014. How a Google Grant and Google Analytics Improved a Website: A Case Example of a University's Arbitration and Mediation Website Used by Students, Business and the Public. *International Journal of Business Administration*, 5(4).
- [98] Moral, P., Gonzalez, P. and Plaza, B., 2014. Methodologies for monitoring website performance: Assessing the effectiveness of AdWords campaigns on a tourist SME website. *Online Information Review*, 38(4), 588-575.
- [99] Rancati, E. and Gordini, N., 2014. Content Marketing Metrics: Theoretical Aspects and Empirical Evidence. *European Scientific Journal*, ESJ, 10(34), 1857-7881.
- [100] Halvorson, K., 2010b. Intentional Communication: Expanding our Definition of User Experience Design. *Interactions*, 17(3), 75-77.
- [101] Handley, A. and Chapman, C.C., 2010. Content rules: How to create killer blogs, podcasts, videos, ebooks, webinars (and more) that engage customers and ignite your business. 5. John Wiley & Sons.
- [102] Lieb, R., 2011. Content Marketing: think like a publisher. How to use content to market online and in social media. Indianapolis: Que Publishing.
- [103] Rose, R. and Pulizzi, J., 2011. *Managing Content Marketing. The real-world guide for creating passionate subscribers to your brands.* Cleveland: CMI Books.
- [104] Jefferson, S. and Tanton, S., 2013. *Valuable Content Marketing. How to make quality content the key of your business success.* London: Kogan Page.
- [105] McGrane, K., 2014. Content in a Zombie Apocalypse. Presentation. In: BBC News Labs weblog. 18 August 2014 (accessed 12 September 2022). Available from: <https://karenmcgrane.com/category/content-strategy/>.
- [106] McGrane, K., 2012a. Adapting ourselves to adaptive content (video, slides, and transcript, oh my!). In: Karen McGrane weblog. 4 September 2012 (accessed 13 September 2022). Available from: <http://karenmcgrane.com/2012/09/04/adapting-ourselves-to-adaptive-content-video-slides-and-transcript-oh-my>.
- [107] Plotnik, A., 1982. *The elements of editing: a modern guide for editors and journalists.* New York: Macmillan.
- [108] Weblecredible, 2014. Higher Education Report 2014. University websites: making the grade? An investigation into the level and importance of user experience for UK universities. Weblecredible.
- [109] Mayhew, D.J., 1999. The usability engineering lifecycle. In CHI'99 Extended Abstracts on Human Factors in Computing Systems, ACM, 5, 147-148.
- [110] Wangenheim, F.V., 2005. Postswitching negative word of mouth. *Journal of Service Research*, 8, 67-78.
- [111] Shitkova, M., Holler, J., Heide, T., Clever, N. and Becker, J., 2015. Towards Usability Guidelines for Mobile Websites and Applications. *Business Information Systems (Wirtschaftsinformatik)*, 1603-1617.
- [112] Aldekhail, M., 2016. Application and Significance of Web Usage Mining in the 21st Century: A Literature Review. *International Journal of Computer Theory and Engineering*, 8(1), 41-47.
- [113] Vera, F., Sanchez, J.A. and Cervantes, O., 2016. Enhancing User Experience in Points of Interest with Augmented Reality. *International Journal of Computer Theory and Engineering*, 8(6), 450-457.
- [114] Ferne, T., 2018. Part 2: Prototyping formats for news and Generation Z. BBC News Labs. In: BBC News Labs weblog. 18 July 2018 (accessed 12 September 2022). Available from: <https://medium.com/bbc-news-labs/beyond-800-words-prototyping-new-story-formats-for-news-e3102e783b5f>.
- [115] Jung-Hwan, K., Kim, M., Park, M. and Yoo, J., 2021. How interactivity and vividness influence consumer virtual reality shopping experience: the mediating role of telepresence: An International Journal. *Journal of Research in Interactive Marketing*, 15(3), 502-525.
- [116] Grand View Research, 2017. Virtual reality market size, share and trends analysis report by device, by technology, by component, by application (aerospace and defense, commercial, consumer electronics, industrial and medical), by region, and segment forecasts, 2018-2025. In: Grand View Research weblog. 2017 (accessed 13 September 2022). Available from: <https://www.grandviewresearch.com/industry-analysis/virtual-reality-vr-market>.
- [117] Alsop, T., 2022. Statista: Virtual reality (VR) – statistics and facts. 11 August 2022 (accessed 12 September 2022). Available from: <https://www.statista.com/topics/2532/virtual-reality-vr/>.
- [118] Grand View Research, 2021. Virtual Reality Market Size, Share & Trends Analysis Report By Technology (Semi & Fully Immersive, Non-immersive), By Device (HMD, GTD, PDW), By Component (Hardware, Software), By Application, By Region, And Segment Forecasts, 2022 – 2030. Market Analysis Report. Report ID: GVR-1-68038-831-2. In: Grand View Research weblog. 2021 (accessed 13 September 2022). Available from: <https://www.grandviewresearch.com/industry-analysis/virtual-reality-vr-market>.
- [119] Martinez-Navarro, J., Bigne, E., Guixeres, J. and Alcaniz, M., 2019. The influence of virtual reality in e-commerce. *Journal of Business Research*, 100, 475-482.
- [120] Peukert, C., Pfeiffer, J., Meißner, M., Pfeiffer, T. and Weinhardt, C., 2019. Shopping in virtual reality stores: the influence of immersion on system adoption. *Journal of Management Information Systems*, 36(3), 755-788.
- [121] Wang, C.L., 2021. New frontiers and future directions in interactive marketing: inaugural Editorial. *Journal of Research in Interactive Marketing*, 15(1), 1-9.
- [122] Tractinsky, N., Cokhavi, A., Kirschenbaum, M. and Sharfi, T., 2006. Evaluating the consistency of immediate aesthetic perceptions of web pages. *International journal of human-computer studies*, 64(11), 1071-1083.
- [123] Guo, F., Wang, X-S., Shao, H., Wang, X-R. and Liu, W.-L., 2020. How User's First Impression Forms on Mobile user Interface?: An ERPs Study. *International Journal of Human-Computer Interaction*, 36(9), 870-880.
- [124] McGee, J., 2015. *Breakpoint: The Changing Marketplace for Higher Education.* Baltimore (MC/USA): Johns Hopkins University Press.
- [125] Cao, Y., Proctor, R.W., Ding, Y., Duffy, V.G., Zhang, Y. and Zhang, X., 2021. Influences of Color Salience and Location of Website Links on User Performance and Affective Experience with a Mobile Web Directory. *International Journal of Human-Computer Interaction*, 37(6), 547-559.
- [126] McGrane, K., 2015. *Going responsive.* New York, NY: A Book Apart.
- [127] Pulizzi, J., 2014. *Epic Content Marketing. How to tell a different story, break through the clutter, and win more customers by marketing less.* London: McGraw Hill Education.
- [128] Zhang, P. and Von Dran, G.M., 2001. User Expectations and Rankings of Quality Factors in Different Web Site Domains. *International Journal of Electronic Commerce*, 6(2), 9-33.
- [129] Zhang, P., Von Dran, G.M., Blake, P. and Pipithsukunt, V., 2001. Important design features in different website domains. *e-Service Journal*, 1, 77-91.
- [130] Muylle, S., Moenaertb, R. and Despontin, M., 2004. The conceptualization and empirical validation of website user satisfaction. *Information & Management*, 41(5), 543-560.
- [131] Dholakia, U.M. and Rego, L.L., 1998. What makes commercial web pages popular? *European Journal of Marketing*, 32(7,8), 724-736.
- [132] Diamond, S., 2016. *Content Marketing for Dummies.* Hoboken, New Jersey: John Wiley & Sons, Inc.
- [133] Manic, M., 2015. Marketing engagement through visual content. *Bulletin of the Transilvania University of Brasov. Economic Sciences, Series V*, 8(2), 89-94.
- [134] Cai, S. and Xu, Y., 2006. Effects of outcome, process and shopping enjoyment on online consumer behaviour. *Electronic Commerce Research and Applications*, 5(4), 272-281.
- [135] Weblecredible, 2013. Higher Education Report 2013. University websites: making the grade? An investigation into the level and importance of user experience for UK universities. Weblecredible.
- [136] Bridge, E., 2018. Developing a Research Based Rich Media Strategy to Recruit Students. Associate Director of Marketing Communications, University of Bradford. In: Higher Education Marketing Conference, London, UK, 17 April 2018, Proceedings. The video mentioned: <https://www.youtube.com/watch?v=YtoG94nYLUk>.
- [137] Smalley, K., 2018. Case study: Transforming Higher Education Marketing by Telling Stories. Head of Marketing and Campaigns, University of Reading. In: Higher Education Marketing Conference, London, UK, 17 April 2018, Proceedings. <https://highereducationmarketing.co.uk/agenda/>.
- [138] Halvorson, K., 2008. The Discipline of Content Strategy. Issue 274. In: A List Apart weblog. 16 December 2008 (accessed 12 September 2022). Available from: <https://alistapart.com/article/thedisciplineofcontentstrategy>.
- [139] Pulizzi, J. and Barrett, N., 2009. *Get content. Get customers.* New York, NY: McGraw Hill.
- [140] Pulizzi, J., 2016. The History of Content Marketing (Updated Infographic). Content Marketing Institute. In: Content Marketing Institute (CMI) weblog. 1 July 2016 (accessed 12 September 2022). Available from: <http://contentmarketinginstitute.com/2016/07/history-content>

marketing/.

- [141] Anderson, M. and Jiang, J., 2018. Teens, social media & technology. In: Pew Internet weblog. 31 May 2018 (accessed 12 September 2022). Available from: <http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/>.
- [142] Curtis, B.L., Ashford, R.D., Magnuson, K.I. and Ryan-Pettes, S.R., 2019. Comparison of Smartphone Ownership, Social Media Use, and Willingness to Use Digital Interventions Between Generation Z and Millennials in the Treatment of Substance Use: Cross-Sectional Questionnaire Study. *Journal of Medical Internet Research*, 21(4), e13050, 1-15.
- [143] Vogels, E.A., Gelles-Watnick, R. and Massarat, N., 2022. Pew Research Center: Teens, Social Media and Technology 10 August 2022 (accessed 12 September 2022). Available from: <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.
- [144] Perrin, A. and Jiang, J., 2018. About a quarter of US adults say they are 'almost constantly' online. Pew Research Center: Internet & Technology. In: Pew Internet weblog. 14 March 2018 (accessed 12 September 2022). Available from: <http://www.pewresearch.org/fact-tank/2018/03/14/>.
- [145] Amsbary, J.H. and Powell, L., 2003. Factors Influencing Evaluations of Web Site Information. *Psychological Reports*, 93(1), 191-198.