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EDITORIAL

Dear Readers,

Commitment is the foundation of great accomplishments. In 2022, our committed editorial team members helped create and maintain an interdisciplinary community of academics, industry experts, early career researchers and young professionals. At the GiLE Foundation, we are dedicated to diagnosing as well as solving the problems young people face in terms of their personal skills development. We focus on publication and knowledge transfer, and at the same time, aim to empower young researchers and young professionals.

Volume 2 No. 2. is here with a bang! In the **Guest Column** section, *Dr William Donald and Dr Maria Mouratidou* are two subject matter experts who focus on supporting young people in the transition from higher education into the labour market. They look at the challenges and opportunities that university students face at the pivotal moment when they transition from university into industry and prepare for a sustainable career. Next, in the **Food for Thought** section, we present two very timely and relevant articles written by *Ms Ute Franzen-Waschke.* Now that hybrid work apparently 'is here to stay', the author – a senior consultant and coach – looks at how leaders need to be upskilled and which new skills they need to lead effectively in a remote or hybrid environment. The second contribution considers why leaders should pay attention to diversity, equity, and inclusion in remote and hybrid environments.

The theme is continued in our **Early-Career Researchers** and **Research Articles** sections. The contributions can be grouped into two main categories: the importance of leadership skills and employability skills. For graduates and young professionals to become employable, especially in today's turbulent and unpredictable world, they need to have a set of personal qualities, behaviours, and attitudes.

The importance of improving the performance of virtual teams at a time where technology presents seemingly limitless opportunities, cannot be overstated. *Ms Zara Alexa Schweimler* focuses on leadership skills that are needed to create a team culture that works well in the case of multicultural virtual teams.

"Artificial intelligence", "discriminatory algorithms", and "machine learning" are concepts that have begun to invade and transform our way of life. They bring significant benefits to individuals and society, but they present certain risks as well. *Mr Shivaan Munnisunker* looks at the areas of AI ethics that leaders must be aware of if they are to operate successfully.

Women are often powerful agents of change. *Ms Moldir Pocstar* considers why there are several females with advanced educational degrees, yet only a few of them are in leadership positions in higher education in Kazakhstan.

The famous Disney characters have always affected people's character development. In their research paper, *Mr Norbert Griszbacher, Ms Ildikó Kemény* and *Dr Ákos Varga* look at how the Disney movies, films and cartoons make an impact on the cognitive and behavioural development of young people from early childhood.

The last research paper is written by three established academics, *Dr Graham Manville, Dr William Donald, and Professor Anita Eves.* Their paper explores the opportunities and challenges of embedding authentic assessment into the university curriculum. Such an approach to course

evaluation tests students' skills and knowledge in real-life situations to prepare them for the world of work and to help universities remain relevant in a changing world.

Volume 2. No. 2. concludes with the newly introduced **Policy and Social Challenges** section. In the first paper published in this section, a young leader and professional, *Mr István Kárász,* who is President of Pact4Youth Association in Hungary and analyst at the Research and Innovation and Open Science consultancy in Technopolis Group*,* discusses nothing less relevant for our readership than how Open Science can be a key enabler of development and an opportunity for young researchers.

You may have noticed that our website underwent an overhaul in 2022. Our team expanded the journal's online presence, as well as started improving article discoverability, and establishing a reputation for high-quality publication in our field. Individual papers are uploaded to the Hungarian Scientific Bibliography (MTMT) a few days after the release of the Issues, and all the papers are archived and made freely available at the Library and Information Centre of the Hungarian Academy of Sciences (Electronic Periodical Archive and Database, EPA). Moreover, GJSD continues to publish articles in an open access format with no Article Processing Charges (APCs) or publication fees – ensuring that the work of our contributors can receive maximum visibility and impact – regardless of their access to financial resources.

I would like to thank all the Editors of this Issue, as well as the Contributors who have chosen our journal to disseminate their research. I wish you all happy reading, and I look forward to your submissions to Vol.3. No.1 in 2023.

Kind regards,

Dr. Judit Beke

Judit Beke is the Editor-in-Chief, Co-Creator of the GiLE Foundation

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GiLE Journal of Skills Development

Can Embedding Authentic Assessment Into the Curriculum Enhance the Employability of Business School students?

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Abstract

The purpose of this paper is to explore whether embedding authentic assessment into the university curriculum can enhance the employability of business school students. Three research questions are addressed: (1) What is the rationale for authentic assessment in the curriculum?, (2) What are the opportunities for authentic assessment to enhance the employability of students?, and (3) What are the challenges of embedding authentic assessment into the university curriculum? The findings indicate that authentic assessment has the potential to increase the employability of students graduating from university business schools. The opportunity to develop human capital, collaborate with fellow students and solve real-world problems can help students to develop and signal their employability to prospective employers. However, lecturers and administrative staff require additional time to plan and deliver modules using this form of assessment. Students also need to be convinced of the benefits of the extra time investment if the module is not a compulsory component of their degree course. Our paper proposes that authentic assessment should be utilised to a greater extent by university business schools. The benefits of such an approach can transcend students, graduates, universities, organisations, and broader society. Directions for future research are also discussed to maximise the benefits of authentic assessment and seek to reduce the barriers to embedding authentic assessment in the curriculum.

***Keywords*:** Authentic Assessment, Employability, Higher Education, Human Capital.

1. Introduction

The neoliberalisation of higher education positions the student as the consumer and education as a commodity, whereby market transactions shape the relationship between students and universities (Mintz, 2021). The COVID-19 pandemic as a global chance event has exacerbated competition for graduate employment as graduates from different cohorts contest against each other for employment opportunities (Donald et al., 2021). Moreover, employers often criticise the quality of graduates entering the labour market, claiming that graduates cannot plan or think strategically, cope with uncertainty, or work under pressure (Deng, 2021; James & Casidy, 2018). This evidences a gap between the teaching and assessment that occurs in educational settings with the needs of organisations for graduates to operate in the workplace (Gulikers et al., 2006). Additionally, whilst the perceived benefits of participation in higher education continue to outweigh the perceived costs, the gap is narrowing due to increasing tuition fees and a reduction in graduate employment opportunities in some sectors (Donald et al., 2018).

Higher education is witnessing a paradigm shift from objective standardised tests of knowledge requiring low-level cognitive skills (Koh et al., 2012) toward a more complex assessment of knowledge and higher-order skills via authentic assessment (Villarroel et al., 2018). The term authentic assessment is defined by James and Casidy (2018, p. 1) as "*tasks that measure and test the skills and practice that they will need in their future careers – tasks that mirror professional practice and test more than just rote memorisation*". Outstanding teachers use assessment as a learning opportunity, not just to rate their students' efforts but to evaluate the ability of an individual to put knowledge into practice (Thurab-Nkhosi et al., 2018). Contemporary notions of student learning in higher education reflect a synthesis of ideas from constructivist, socio-cognitive, and situated perspectives, whereby the learning occurs via the synthesis of knowledge which is constructed in the process of interaction with a social environment (Hawe & Dixon, 2017). Authentic assessment practice is well-established in some fields, for instance, nursing or apprenticeship tracks as examples of vocational education (Gulikers et al., 2006). However, whilst authentic assessment has begun to emerge in the curriculum of business schools, it remains in an embryonic state. Maxwell and Broadbridge (2017) call on universities to do more to promote styles of learning and assessment that can bridge the gap between the expectations of students and graduate employers. Yet, new assessment methods have proved challenging to implement in educational settings (Robson et al., 2022; Villarroel et al., 2018).

In response, this paper aims to explore whether embedding authentic assessment into the university curriculum can enhance the employability of business school students. Three Research Questions (RQs) are addressed: (RQ1) What is the rationale for authentic assessment in the curriculum?, (RQ2) What are the opportunities for authentic assessment to enhance the employability of students?, and (RQ3) What are the challenges of embedding authentic assessment into the university curriculum? The theoretical contribution comes from advancing understanding of authentic assessment beyond vocational education settings to optimise the curriculum of business-related degree subjects. The practical contribution comes from offering opportunities to enhance the employability of business school students for the benefit of students, graduates, universities, organisations, and broader society.

The paper is structured as follows. A brief discussion of the employability agenda, human capital, and signalling of employability set the context. Next, the rationale for authentic assessment in the curriculum is presented. Subsequently, the opportunities for authentic assessment to enhance student employability and the challenges of embedding authentic assessment into the curriculum are explored. The paper concludes with a discussion, implications, and presentation of a future research agenda.

2. The Employability Agenda

The Teaching Excellence and Student Outcomes Framework (TEF) enables participating universities to achieve a gold, silver, bronze, or provisional award by assessing "*excellence in teaching… and how each higher education provider ensures excellent outcomes from their students in terms of graduate-level employment or further study*". (Office for Students, 2021, Online). The TEF positions employability as a constituent part of good teaching rather than a peripheral activity provided by university career services. The TEF sees universities compete with each other to attract prospective students by evidencing opportunities for career success and value for money regarding their investment in degree studies. This is crucial since the perceived gap between the benefits and costs is narrowing due to tuition fees of up to £27,000 for a 3-year undergraduate degree plus additional living expenses (Donald et al., 2018). The challenge to universities is compounded by government legislation promoting apprenticeships and degree apprenticeships as alternative routes for school leavers to gain work experience alongside their studies (Degree Apprenticeships, 2015).

Unfortunately, the terminology of employability and employment is often used interchangeably despite having different meanings (Holmes, 2013; Jackson, 2015). Employability refers to "the potential a graduate has for obtaining and succeeding in graduate-level positions" (Knight & Yorke, 2004, p. 4). Employment is a snapshot-in-time measure of whether an individual currently holds a job, but this fails to account for structural factors whereby a graduate is employable without being employed (Vanhercke et al., 2014). Universities are thus tasked with producing employable graduates whilst partnering with graduate employers to secure employment opportunities for their graduates. Furthermore, league table rankings tend to lead to a degree of homogeneity or isomorphism whereby normalising operations is considered necessary for survival and sustainability (DiMaggio & Powell, 1983). Yet, the COVID-19 pandemic has increased the appetite for collaboration and innovation as pre-existing norms are challenged (Donald et al., 2021).

In this paper, the focus is on the use by academics operating within higher education institutions of authentic assessment within the course curriculum as a vehicle to enhance the employability of their students. Our focus now moves to the theoretical framework of human capital theory and signalling theory before discussing the rationale for authentic assessment within the curriculum.

3. Human Capital and Signalling Employability

Human capital theory emerged in the 1960s (Becker, 1964; Schultz, 1961) and was then applied to the field of higher education consisting of social capital, cultural capital, and scholastic capital (Useem & Karabel, 1986). The notion of the need for achievement (Cook et al., 1981) and inner-value capital (Baruch et al., 2005) were subsequently collated under the term psychological capital (Luthans et al., 2004; Luthans et al., 2015). Additionally, the concept of market capital (Baruch et al., 2005) and skills was added to human capital to recognise their alignment with employability (Barrie, 2007; Cranmer, 2006; Knight & Yorke, 2004). Therefore, in the context of undergraduate students, human capital consists of social capital, cultural capital, psychological capital, scholastic capital, market-value capital, and skills (Donald et al., 2019). Universities are tasked with increasing their students' human capital levels and fostering a commitment to lifewide and lifelong learning to produce graduates capable of improved job performance and productivity (Baruch et al., 2005; Cole & Donald,

2022; Suleman, 2018). Subsequently, organisations strategically acquire human capital via the employment of graduates as a means of organisational sustainability via competitive advantage, productivity, and profitability (Donald et al., 2020).

However, graduates need to be able to convey their human capital to potential employers, particularly as suggestions of grade inflation reduce the value of the degree classification as a differentiator of talent (Bachan, 2017; Chen et al., 2017). Consequently, the graduate premium can be attributed to a combination of human capital and signalling (Rospigliosi et al., 2014). Signalling theory addresses information asymmetry between two parties termed the signaller and the receiver (Spence, 1973). In the context of graduate recruitment, graduates signal their employability to prospective employers via the application and selection process (Kalfa & Taksa, 2015). A prospective employer decodes the signals provided by each candidate to identify talent and inform hiring decisions (Anderson & Tomlinson, 2021).

We believe that authentic assessment offers universities a way to increase their students' human capital and help graduates signal their employability to secure graduate employment. The curriculum also provides an opportunity to help students to develop their employability proactively through their university studies rather than as a reactive necessity in the final semester of study or following graduation (Jackson & Tomlinson, 2020). This paper now sets out the rationale for authentic assessment before exploring the opportunities and challenges of embedding authentic assessment within the university curriculum.

4. The Rationale for Authentic Assessment in the Curriculum

RQ1: What is the rationale for authentic assessment in the curriculum?

Current approaches to assessment within the business school curriculum usually involve a mix of formative and summative assessments. Formative assessment involves either informal or practice assessments that take place throughout the course and do not contribute to the final module mark (Yorke, 2003). In contrast, summative assessment occurs when a formal assessment does contribute to the final module mark to measure and certify learning outcomes (Earl, 2003). However, there are concerns that these assessment approaches lack opportunities for students to apply theoretical constructs (Mooney & Harkison, 2018) and engage in transformative learning (James & Casidy, 2018). In particular, employers continue to raise concerns over the quality of graduates, and this problem is likely to be exacerbated by suggested grade inflation and COVID-19-related impacts on assessment (Donald et al., 2021; Hinchliffe & Jolly, 2011).

One approach to address such concerns is authentic assessment, which is used extensively in vocational-based degree programmes (Gulikers et al., 2006). However, its application in the context of the curriculum of business schools is not yet sufficiently developed (Maxwell & Broadbridge, 2017). As previously mentioned, James and Casidy (2018, p. 1) define authentic assessment as "*tasks that measure and test the skills and practice that they will need in their future careers – tasks that mirror professional practice and test more than just rote memorisation*". This definition acknowledges the performance of authentic tasks (Mueller, 2005) and emphasises the practical application of tasks within a real-world setting (Fook & Sidhu, 2010). Moreover, authentic assessment can enhance instructional practices and fill gaps in the curriculum resulting in increased student performance (Dunn & Mulvenon, 2009).

Five criteria to assess the authentic intellectual quality of assessment tasks include depth of knowledge, knowledge criticism, knowledge manipulation, sustained writing, and connections to the real world (Koh et al., 2012). Depth of knowledge refers to using subject-specific skills, tools, and methods to understand how subject matter is organised and structured to identify interconnections with other areas of knowledge. Knowledge criticism requires students to judge the value, credibility, and soundness of sources of information to foster critical literacy. Knowledge manipulation is the organisation, interpretation, analysis, synthesis, or evaluation of information to facilitate higher order thinking and reasoning skills. Sustained writing elaborates on understanding, explanations, arguments, and conclusions and the ability to articulate these in prose form. Finally, connections to the real-world focus on cultivating valuable skills in the classroom that are transferable to a workplace setting and broader society.

When addressing these criteria, there is an opportunity to counteract the marketisation of higher education via a focus on the quality of assessment. This view is supported by Villarroeal et al. (2018) through the identification of three dimensions of authentic learning – realism, cognitive challenge, and evaluative judgement. Realism is related to, for instance, being contextualised to everyday life, relevance beyond the classroom, and performing similar tasks to real-world settings. Realism can be evident in case studies or exams where these act as a proxy for real life. Other forms of authentic assessment can include inquiry-based reports, oral presentations, role-playing, and situational judgement tests (James & Casidy, 2018). Cognitive challenge relates to higher order thinking as demonstrated in Bloom's taxonomy which was extended further from the early 2000s (Krathwohl, 2002; Krathwohl & Anderson, 2010) and incorporates aspects of problem-solving, linking concepts, drawing sound conclusions, and the creation of new knowledge. Moreover, constructing knowledge through engaging in higher-order retrieval practice is more beneficial than via fact-based retrieval practice (Agarwal, 2019). Finally, evaluative judgement acknowledges that authentic assessment is a subjective and relative concept only authentic within a particular situation, place, or profession.

A key rationale for embedding authentic assessment into the curriculum of business schools is that it comprises assessment tasks that mirror professional practice rather than testing rote memorisation (Scott & Unsworth, 2018). This exposure helps students to develop professionally relevant skills to navigate uncertainty and adapt to an evolving workplace (Thurab-Nkhosi et al., 2018). This supports the view of Gulikers et al. (2006) that increasing authenticity in assessment practices can enhance student learning and prepare students better for entry into the labour market. The learning via authentic assessment is thus contextualised and focuses on the use of skills and demonstration of competencies, knowledge, and attitudes that are applied in professional life when handling problem situations (Eddy & Lawrence, 2013; Villarroel et al., 2018).

Authentic assessment also provides the opportunity for students to acquire human capital, enhance employability, and have the confidence to signal this employability to potential employers (Anderson & Tomlinson, 2021; Donald et al., 2019). This is because it focuses on deep learning and knowledge transformation rather than surface-level learning (Deng, 2021; Gulikers et al., 2008). The inquiry-based approach stimulates self-directed learning and encourages a lifelong learning mentality (Hume & Coll, 2010; Koh et al., 2012) as a means for career sustainability (Donald et al., 2020). The opportunity for students to challenge pre-existing assumptions via authentic assessment empowers them to establish themselves in the world and to be reflexive about their own way of doing and being (Vu & Dall'Alba, 2014).

Furthermore, authentic assessment has been shown to enhance reflection, communication, and collaboration (Scott & Unsworth, 2018). It is also favoured by career-oriented students (James & Casidy, 2018), suggesting that authentic assessment may offer an opportunity to address calls in the vocational behaviour literature for innovative ways to engage students with career support via the curriculum (Quinlan & Renninger, 2022).

The focus of this paper now shifts to examining the opportunities for using authentic assessment in business schools to enhance student employability.

5. Opportunities for Authentic Assessment to Enhance Student Employability

RQ2: What are the opportunities for authentic assessment to enhance the employability of students?

Authentic assessment develops students' higher order thinking and deep learning skills (Guliker et al., 2008), aiding knowledge construction, complex thinking, elaborated communication, collaboration, and problem-solving in authentic contexts (Koh et al., 2012). The increased depth of learning also provides opportunities for autonomy, commitment, motivation, self-regulation, metacognition, and self-reflection (Villarroel et al., 2018). Authentic assessment enables students to develop these skills and attributes within a safe environment (Sutherland & Markauskaite, 2012) and captures the true ability of students regarding what they know and what they can do (Koh et al., 2012). Moreover, the diversity of students within business schools provides an excellent socio-cultural opportunity to learn from peers who may have different and creative approaches to problem-solving (Bohemia & Davison, 2012). This can increase confidence in students in dealing with less predictable assignments and subsequently prepare them for navigating complexity in the world of work (Mooney & Harkinson, 2018). Additionally, authentic assessment can enhance the employability of students by developing human capital through the construction of networks, exposure to different cultures, psychological development, and the acquisition of skills and attributes (Donald et al., 2019).

Authentic assessment also has the potential to enrich the classroom experience for students and lecturers. Under authentic assessment conditions, learners are engaged and more in control of their own learning. This can energise the learning process and enhance motivation in recognition of the value of assessment to their future professional practice (Gulikers et al., 2008). The benefits to lecturers of developing networks with industry contacts and teaching in an environment with more engaged students can enrich the lives of lecturers, and these benefits transcend to their students (Koh et al., 2012). For example, industry contacts may make lecturers aware of job opportunities for their students. Lecturers may make their industry contacts aware of students they feel would be assets to the organisation. Employer involvement in degree course design and assessment can positively affect graduates' outcomes (Cranmer, 2006). Authentic assessment thus offers the opportunity for lifelong learning and employability, which are antecedents of a sustainable career (Donald et al., 2020). Furthermore, the improved confidence in students can subsequently drive student satisfaction scores reflecting positively on the lecturer and the university (Thurab-Nkhosi et al., 2018). Authentic assessment also develops human capital in students, which is associated with increased levels of perceived employability – whereby the student believes themselves to be more employable – leading to enhanced levels of self-belief and self-efficacy (Donald et al., 2019).

The opportunity to work on real-world problems also provides students with examples on which to draw during their application and assessment for graduate employment. The graduate, as the signaller, can draw on an array of evidence to signal to the organisation as the receiver of the signal that they are capable of performing the specific role (Anderson & Tomlinson, 2021). This can enable graduates to overcome employer concerns surrounding a lack of industry experience since their degree studies have replicated such environments (Jackson, 2015). The need to signal employability is likely to increase as the perception of grade inflation within higher education reduces the effectiveness of degree classifications as a differentiator of ability among graduates (Bachan, 2017). The COVID-19 pandemic has added to this challenge since A-level grades to determine entry into universities had to be determined based on teacher assessment rather than exam conditions leading to record numbers of students achieving top grades (Kippin & Cairney, 2022).

Moreover, employers are experiencing an increased number of applications per job due to the rescinding of contracts of employment in the last graduate recruitment cycle (Donald et al., 2021). The concern is that diversity outcomes are negatively impacted as social and cultural capital plays a more significant role in differentiating candidates (Holt-White & Montacute, 2020). This highlights the opportunities for authentic assessment since it provides a way for students to acquire these types of human capital and to have the confidence to signal these to potential employers (Anderson & Tomlinson, 2021). These outcomes will also be crucial for the survival of universities when competing with apprenticeship degrees, whereby students can earn while they learn (Degree Apprenticeships, 2015).

6. Challenges of Embedding Authentic Assessment into the Curriculum

RQ3: What are the challenges of embedding authentic assessment into the university curriculum?

Unfortunately, academics face several challenges when seeking to embed authentic assessment into the business school curriculum. Aziz et al. (2020) state that one such challenge is the lack of training and lack of support from school administration groups. The concern is that authentic assessment does not always assess what an academic seeks to assess (Hathcoat et al., 2016). For example, if the assessment focuses heavily on a written report, then this can end up measuring writing skills rather than the application of knowledge. Hathcoat et al. (2016) found that 25% of the difference in critical thinking scores within authentic assessment was related to differences in writing style. Villarroel et al. (2018) offer a four-step process to guide authentic assessment focusing on workplace context, assessment design, judgement, and feedback. Their model captures the realism, contextualisation, and problematisation in assessing curricular content, linking knowledge with life and work. However, authentic assessment requires moving away from a teaching paradigm involving covering material and end-of-course static assessments to a learning paradigm focusing on learner-centric experiences and active learning approaches (Eddy & Lawrence, 2013). This requires academics to be supported in moving away from traditional norms and seeking innovative ways to embed authentic assessment into the curriculum. Poorly designed authentic assessment can do more harm than good since it can be counterproductive to learning (Gulikers et al., 2006). In particular, there should be constructive alignment between the curriculum and assessment methods with skills and broader human capital development for application in a real-world work environment (James & Casidy, 2018). Yet, authentic assessment without some degree of standardisation across business schools and

institutions could result in a second dystopian condition within education where wrong conclusions could be drawn from aggregate scores from an institution owing to a lack of interchangeability in tasks, occasions, and students (Hathcoat et al., 2016). One opportunity is to integrate traditional and authentic assessment forms into the curriculum (Villarroel et al., 2018).

Another challenge is the overwhelming level of documentation and the burden of teaching hours that can often be associated with authentic assessment (Aziz et al., 2020; Bould & Molley, 2013). Changing assessment forms requires time, energy, and intellectual resources (Mooney & Harkinson, 2018; Villarroel et al., 2018). Nevertheless, MacLean (2016) suggests that the challenges from an increased workload can be offset by the increased personal reward from students' high-quality work. However, academics can resist, particularly if they feel that increased teaching hours limit their opportunities to conduct academic research. This highlights the need for buy-in from management, academics, and business school administrators for the sustainable implementation of authentic assessment (Eddy & Lawrence, 2013).

One of the most significant challenges of embedding authentic assessment into the curriculum is the impact on student satisfaction survey results. The rise of student power has intensified in the Millennial Generation of students graduating after 2000 (Maxwell & Broadbridge, 2017) and Generation Z students born after 2000 (Ozkan & Solmaz, 2015). This generation has received high levels of positive affirmation, which has been linked with increased measures of self-entitlement and narcissism (Twenge & Foster, 2010). There are concerns that accommodations made by universities to achieve high student satisfaction scores have led to grade inflation since higher results often lead to higher reported satisfaction levels (Stroebe, 2016). Furthermore, authentic assessment requires buy-in from students to engage and embrace the approach making it a riskier teaching style in the context of student feedback (Thurab-Nkhosi et al., 2018; Vu & Dall'alba, 2014). Students can view authentic assessment as more time-consuming than other forms of summative assessment, and they may opt to avoid these modules, where permitted, due to anxiety concerning time pressures (Fook & Sidhu, 2010). This is compounded by students not realising the benefit of specific modules until they enter the labour market (Gibbons et al., 2015). This requires business schools to highlight the benefits of authentic assessment to engage students in the process and to enhance lifelong learning and employability as antecedents of career sustainability (Donald et al., 2020).

Additionally, authentic assessment is subjective, and academics often perceive a greater level of authenticity in their teaching and assessment than their students (Gulikers et al., 2006). A concern reported by students is that the assessments are too generic and not sufficiently aligned with personal aspirations (Gulikers et al., 2008). Students also have worries about peer assessment due to fears of being wrong, which can affect their sense of self-worth and confidence (Hawe & Dixon, 2017). This could be problematic given the negative impacts on the self-perceived well-being of students due to the COVID-19 pandemic (Donald & Jackson, 2022). However, as students progress through their university degree, their views of authentic assessment tend to improve, although more experienced students may still be critical of authentic assessment approaches if they feel they have not developed new skills or attributes (Gulikers et al., 2006). Universities must, therefore, balance the benefits of authentic assessment with the potential risks to student satisfaction survey scores, university league table rankings, and the attraction of future students and income for the university.

7. Discussion and Implications

Our paper has framed the rationale for authentic assessment in the curriculum (RQ1), highlighted the opportunities for authentic assessment to enhance the employability of students (RQ2), and raised awareness of the challenges of embedding authentic assessment into the university curriculum (RQ3). This approach brings rigour to authentic assessment as an approach within HEIs and pragmatically highlights opportunities and risks to enable educators to make informed decisions when designing their curriculums.

Practically, we believe that students, educators, career advisors, universities, and employers can all benefit from authentic assessment. Students can apply theoretical constructs (Mooney & Harkison, 2018), engage in transformative learning (Deng, 2021; James & Casidy, 2018), and develop new ways to signal their employability to potential employers via the acquisition of human capital (Anderson & Tomlinson, 2021; Donald et al., 2019). Educators can develop their networks with industry, improve engagement with their students, and feel a sense of enrichment from their work (Koh et al., 2012). Career advisors benefit since authentic assessment focuses on the development of student employability, offering ways to overcome challenges highlighted in the vocational behaviour literature regarding engaging students in career support initiatives (Buckholtz & Donald, 2022; Donald et al., 2018). These benefits transcend to the university level via increased league table rankings and TEF scores which can subsequently be used to attract prospective students and associated revenue streams. The partnerships with organisations and professional bodies as part of authentic assessment can also be used to highlight the opportunities for prospective students. Such opportunities include gaining real-world experience as part of the degree and exposure to innovative and collaborative teaching methods. These lead to enhanced employability outcomes and the ability for graduates to navigate their way in a volatile and rapidly evolving labour market. Moreover, we believe that authentic assessment can address the damage imposed by suggested grade inflation (Bachan, 2016; Stoebe, 2017), which is likely to have been exacerbated due to the impacts of the COVID-19 pandemic (Bhopal & Myers, 2020). Employers can thus gain a tangible benefit from participation and support in the authentic assessment process by helping to shape graduates to meet the current and future needs of the industry (Hinchliffe & Jolly, 2011). Employers can also gain advanced access to students during their degree studies leading to the development of early career talent pipelines that have been shown to offer a sustainable competitive advantage for organisations (Donald et al., 2020).

Yet, a pragmatic approach needs to be taken by all stakeholders when implementing authentic assessment. For example, universities will need to allocate more time for lecturers to work on curriculum development and deliver their course content (Fook & Sidhu, 2010). Increased investment in administration activities may be necessary, although the involvement of career advisors could alleviate some of these pressures. Crucially, universities need to acknowledge that student satisfaction scores may initially drop while lecturers and students undertake a shift to authentic assessment. Universities should support their staff and reward attempts at embedding authentic assessment into the curriculum, particularly in cases where staff with a history of strong student feedback scores have slight dips in scores for one or two academic years. This captures the need for investment in training lecturers to feel confident using authentic assessment and to revise performance management criteria to align with personnel development and curriculum development objectives (Aziz et al., 2020). More generally, there needs to be an ongoing conversation around how the TEF is measured, what is measured, and how the weightings are decided for each measure. Otherwise, universities face the same issues as schools, whereby innovation can be stifled by 'institutional isomorphism' to the detriment of all stakeholders (Robson et al., 2022).

8. Future Research Agenda

The limitation of this study is the lack of empirical evidence of the benefit of authentic assessment. Future research could provide a cross-sectional or longitudinal sample of graduates that have taken part in authentic assessment during their university degrees. Studies involving graduates that have been in graduate roles for a significant time (e.g., five years) will provide a compelling answer to the efficacy of embedding authentic assessment into the curriculum, which to our knowledge, has not yet been investigated. The views of other stakeholders such as line managers or human resource managers of early career talent in organisations could also be valuable in determining industry satisfaction levels with graduate performance.

Additionally, students need to have experiences within the university curriculum that prepare them to navigate global level threats such as climate change which are likely to bring significant disruption to global economies. The future of work is also evolving via technological advances and Industry 4.0, which have been accelerated by the COVID-19 pandemic (Donald et al., 2021). This suggests that it has never been more critical for academia to engage with industry to ensure that the graduate workforce of tomorrow is prepared for the challenges ahead and that universities remain relevant in this fast-changing world. Particularly given that industry is often ahead of academia when it comes to pragmatic changes in the workplace.

We also believe that education can be influential in developing a deep learning culture within students during their university studies. This aligns with the views of Eddy and Lawrence (2013), who advocate for a shift from an instruction-led paradigm to a learning paradigm in the university curriculum. An immersive experience in authentic assessment may promote higher-order learning outcomes of Bloom's taxonomy (i.e., evaluating and creating) (Krathwohl, 2002), which can serve as a symbiotic relationship between the student, the employer, and the university. Future research in the area of authentic assessment in the university curriculum thus has practical implications as the solutions to the challenges the economy faces will not be readily solved by existing solutions. Increasing critical evaluative skills in students and enabling them to synthesise and create new knowledge will ultimately benefit the students themselves, industry, and broader society.

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GiLE Journal of Skills Development

DEI & Hybrid Work Environments: A Game Changer or Another Disruptor?

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1. Problem Statement

Diversity, Equity, and Inclusion (DEI) have been on the corporate agenda for years, and companies actively seek to raise awareness and mitigate disadvantages for the respective marginalised groups. Some examples of DEI agendas include: (i) how to overcome injustice when hiring or promoting staff from different ethnic and cultural backgrounds, (ii) equal pay, (iii) gender equality, (iv) disability, and (v) neurodiversity. However, the pandemic has raised two key questions. 1. Which additional dynamics are added to the DEI conversation with remote and hybrid workplace scenarios? 2. How do these dynamics impact the decisions of current and future generations of workers when making career decisions and choosing an employer?

2. Levelling the Playing Field

Large consultancies and data-driven organisations are sharing their data and providing insights into who the 'winners' and 'beneficiaries' are regarding remote and hybrid working, and how this impacts their DEI missions. Dowling et al. (2022) report on a survey conducted by McKinsey highlighting that hybrid work environments can benefit the LGBQ+ community (13%) and disabled workers (11%). Subramanian & Washington (2022) report that 81% of black knowledge workers in the US prefer hybrid work constructs over on-site scenarios. The good news, so it seems, is that hybrid work options cater better for the needs of marginalised groups compared to in-person work setups. The sad news is that it appears that marginalised groups feel safer and more accepted in their own home than in the workplace and possibly, therefore, prefer virtual working formats. What happens if these marginalised workers cannot easily shift to remote or hybrid working because their jobs do not allow it? Additionally, what about those workers who cannot work remotely as their colleagues can? Whilst more jobs can now be done from home following the pandemic, this is still not the case for all jobs (Desilver, 2020; Milasi et al., 2021). Looking at sectors such as tourism, nursing, and healthcare as well as civilian workers and the service industry demonstrates what could happen to organisations if they turn a blind eye to workers who are not afforded the freedoms and flexibility to work remotely due to their job roles. Across Germany, one can see the ripple effects of the pandemic already when looking at the chaos at airports during the 2022 summer break (e.g., cancelled

flights, undelivered luggage, long waiting times at check-in and security). There have also been impacts on restaurants or shops in cities (e.g., the need for signs saying that their opening hours must be reduced due to a shortage of staff). Will other companies be impacted next if their blue-collar workers, process engineers, technicians, and other service employees look for jobs that offer them more autonomy and flexibility when it comes to the choice of where to work from? More inequality can also be seen around compensation, where some organisations have opted to pay workers who work remotely a lower salary than their counterparts who work in the office each day. Moreover, why does sexual orientation, gender, or ethnicity determine wages despite the abilities and qualifications being identical to other workers who are paid more? Additionally, why is age sometimes viewed as a benefit due to maturity and experience, whilst at other times it is seen as a disadvantage whereby older workers may be viewed as lacking flexibility and technology skills? Remote and hybrid workplace options might bring positive and promising changes to certain marginalised groups. Still, they could also create new divides – which will be as essential to address as the existing divides that we have been trying to close over decades or even centuries.

3. Conclusion

Diversity has always been a given within populations. Equity is hard to obtain, and Inclusion requires active choices and an intentional focus by all of us. Therefore, humanity has struggled with the Equity and Inclusion aspects and will continue to struggle – not just in the corporate world but in broader society. Hybrid and remote working can offer advantages and benefits to some marginalised groups, but at the same time, they can also facilitate the creation of newly marginalised groups. What does that mean for job choice, skill development, and employability? In German, there is a saying, 'watch out when choosing your career!'. Historically, this meant choosing a job and a career that matched your talents and interests and could be aligned with your family plans. Nowadays, it means considering all of the above AND choosing a job and a career that offers you autonomy and flexibility if you prefer to work remotely. This could mean choosing a career in which you are encouraged to challenge your thinking and the thinking of those around you, where your uniqueness is appreciated and not seen as a consideration, and where Inclusion and Equity are valued and improved. Does such a place exist after all?

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Leadership Skills: What's Expected?

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1. Problem Statement

As organisations are transitioning into a post-Covid working world, there is a myriad of unanswered questions in many areas of the corporate world (Work Trend Index, 2022). How leaders and the workforce need to be upskilled to lead and work better in that 'new' environment seems to be one of them (Billing et al., 2021).

2. What 'New Skills' Do Leaders Need?

In my research, I have found that there is no conclusive data available yet, on whether the skillset of a leader post-pandemic is much different from that of a leader pre-pandemic. When looking at the Microsoft Work Trend Index Annual Report, or an extract from that report (Spataro, 2022), five trends are highlighted that leaders need to understand *to get hybrid right*. Three of them seem interesting in this context: (i) managing employee expectations in a hybrid working world, (ii) the shift in priorities for employees from work towards life, and (iii) how social capital is built differently in a hybrid world. These areas could be indicative of skills in need of development. Ferreira et al. (2021) concluded in their study that 'management', 'communication', and 'technology' are the top three areas of concern to look into for organisations. Ferreira et al.'s (2021) list is a bit of a Deja-Vu in my view. Those areas were already among the 'typical suspects' before the pandemic but can now be experienced, as I point out to my clients, through a **magnifying glass effect**: What did not work well before the pandemic will very likely be as, or even more, challenging in a hybrid work environment.

When conference delegates were asked about their memories of what were the challenges in 2019 and earlier, 'management' and 'technology/tools' were among the top themes mentioned. Leaders in a client's organisation, who were asked which areas they would like to develop skills in to improve leadership in a hybrid working world, came back with role definition and role understanding, and how to communicate and stay in touch with a hybrid workforce to maintain or elevate engagement levels. Much of the aforementioned could be summarised under Ferreira et al.'s (2021) headlines: communication, management, technology.

3. In Need of a New Leadership Development Programme

Synthesising all of the above, a 3-4-month leadership development programme was designed to allow leaders to (i) experiment with technology in a safe environment, (ii) try out technology features that they had not yet used, (iii) work with a virtual collaboration platform that would allow engagement in synchronous and asynchronous ways that they had not yet experienced, and (iv) learn from peers while experimenting in the field with new leadership approaches and receive coaching on the way. Those were the main ingredients for this successful and fully remote new leadership development programme. The programme also invited reflections about role definitions and understanding, different leadership styles, their pros and cons, as well as the implications and adaptations necessary when leading a hybrid workforce.

4. Conclusion

Hybrid workplace scenarios do require different skills to take *centre position,* but those skills are not necessarily new skills. Seasoned as well as emergent leaders need the right mindset and the ability to adapt to different work environments and workers' needs. An openness to play and experiment is also required by organisations. Growth mindset is a buzzword here. Delany (2021) contributes with his research by emphasising that the three domains (i) Organisation, (ii) Line Manager, and (iii) the Remote Worker, each have dedicated responsibilities and contributions to make to help remote work succeed in the long run. According to Delany (2021), organisations need a "grown-up" approach (p. 7) to the topic of remote and hybrid work, otherwise, people will walk away. Line managers need to act as coaches, mentors, and guardians of the respective work culture, developing a "sixth sense" for when workers are "in flow" or "struggling" (p.5). Finally, remote or hybrid workers need to develop skills to be "decisive, action-oriented, and self-organising, allowing team members and leaders to trust each other with the fulfilment of their respective duties, especially for those new on the job or team" (p.5). This systemic view illustrates the different layers which need analysis and dedicated up-skilling. Which skills need upskilling? That question does not have just one answer. Research has started to uncover patterns and trends. Yet, there is a lot more to discover and learn.

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Leadership Job Requirements in Multicultural Virtual Teams: Which Behaviour and Skills Do Leaders Need to Manage Multicultural Virtual Teams Successfully? A Review

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Abstract

Multicultural virtual teams have become increasingly relevant. Organisations and leaders face different challenges in managing these teams. This review analyses and identifies the challenges in multicultural virtual teams and the job requirements for leaders to face these challenges. It answers the question of which behaviour and skills leaders need to manage multicultural virtual teams successfully. A literature review was conducted in which thirty-five publications and their key findings have been considered, analysed, and systemised to derive a concrete requirement profile for leaders of multicultural virtual teams. The results present the challenges that can occur in multicultural virtual teams and the behaviours leaders can demonstrate when facing these challenges. The challenges arise from multicultural differences as well as from the virtual environment. The most important behaviours to face most of the challenges include raising awareness of language barriers and cultural differences, enquiring about team members' needs and expectations, clarifying expectations about the collaboration, establishing binding norms, ensuring compliance, adapting flexibly to individuals and situations, using 'rich-media', and synchronising work schedules. The findings also identify leaders' traits, attitudes and skills to execute the recommended behaviour. Leaders of multicultural virtual teams require sensitivity, flexibility, assertiveness, personal initiative, mastering different leadership styles, negotiation competence, and active listening. The outcome of this paper is a practicable overview of possible challenges and required behaviours as well as traits, attitudes, and skills of leaders when managing multicultural virtual teams. Leaders can benefit from this helpful guide for appropriate behaviour in specific challenges. Recruiters can use the findings as a helpful tool for selecting appropriate leaders for multicultural virtual teams.

***Keywords*:** Multicultural Virtual Teams, Leadership, Job Requirements, Management, Challenges

1. Introduction

Due to the major trends of globalisation and digitalisation, Multicultural Virtual Teams (MVTs) have become increasingly relevant and will continue to do so in the future. The COVID-19 pandemic has further reinforced their relevance, whereby MVTs became increasingly common. Organisations and leaders face new and unfamiliar challenges in managing these teams. The research field is still relatively young, and evidence is consequently thin. Over the last 20 years, several studies have been conducted on managing multicultural or virtual teams effectively. Few of these studies specifically investigate MVTs, and even fewer are based on real-world experience.

Consequently, this paper aims to collect the most significant scientific insights from different studies and identify a requirement profile for leaders of MVTs. This review article summarises existing knowledge and gives a practicable overview for leaders and recruiters looking for appropriate leaders for MVTs.

MVTs combine the characteristics of multicultural teams with those of virtual teams. Multicultural teams are defined as a group of people who originate from different nations and cultures (Stahl et al., 2010). The individuals have spent most of their lives in different countries, therefore learning different languages and acquiring different values, expectations, and behaviours (Balogun & Johnson, 2004). Virtual teams are essentially characterised by the fact that they communicate and coordinate predominantly through electronic media (e.g., e-mail, telephone, or videoconference). Often, team members are geographically dispersed or work in different time zones (CIPD, 2020; Gibson & Gibbs, 2006; Hertel et al., 2005; Powell et al., 2004). Both characteristics can be assumed to define MVTs. Accordingly, MVTs are groups of people originating from different nations and cultures, they are often geographically dispersed, and their communication and coordination depend on electronic media. In the literature, terms like Multinational Virtual Teams (MNVTs) or Global Virtual Teams (GVTs) are used interchangeably. In this paper, the term MVTs will be used.

2. Methods

A literature review was conducted between 3rd and 26th January 2022 to examine which skills and behaviours leaders need to manage MVTs successfully. A keyword search of Google Scholar was undertaken using the following terms (a) Multination Virtual Teams (MNVTs), (b) Global Virtual Teams (GVTs), (c) virtual teams, (d) geographically distributed teams, (e) multinational teams, (f) multicultural teams, (g) intercultural teams, and (h) cross-cultural teams. These terms were subsequently used in combination with one or more of the following keywords (i) cultural differences, (ii) challenges, (iii) leadership, (iv) management, (v) intercultural communication, (vi) computer-mediated communication, and (vii) online-communication channels. In total, 35 publications have been considered and analysed for this paper.

The analysis followed a four-step process. In step one, the relevant evidence from the different sources was analysed. In step two, the content was categorised according to the different types of challenges (e.g., language, cultural communication problems, geographical distance problems, media communication problems etc.). In step three, each challenge's content was subdivided into reasons and ideas for resolutions. In step four, the necessary characteristics, skills, and behaviours that leaders of MVTs should fulfil were derived.

The result of the literature review was a large worksheet, whose contents are explained in detail in the following sections of this paper. Furthermore, a summarised version of the worksheet was created to provide an overview of the challenges that can arise in MVTs, the behaviours required to overcome them, and the derived traits, attitudes, and skills that leaders should bring to their job. This practical overview (Table 1) can be found at the end of section 3.

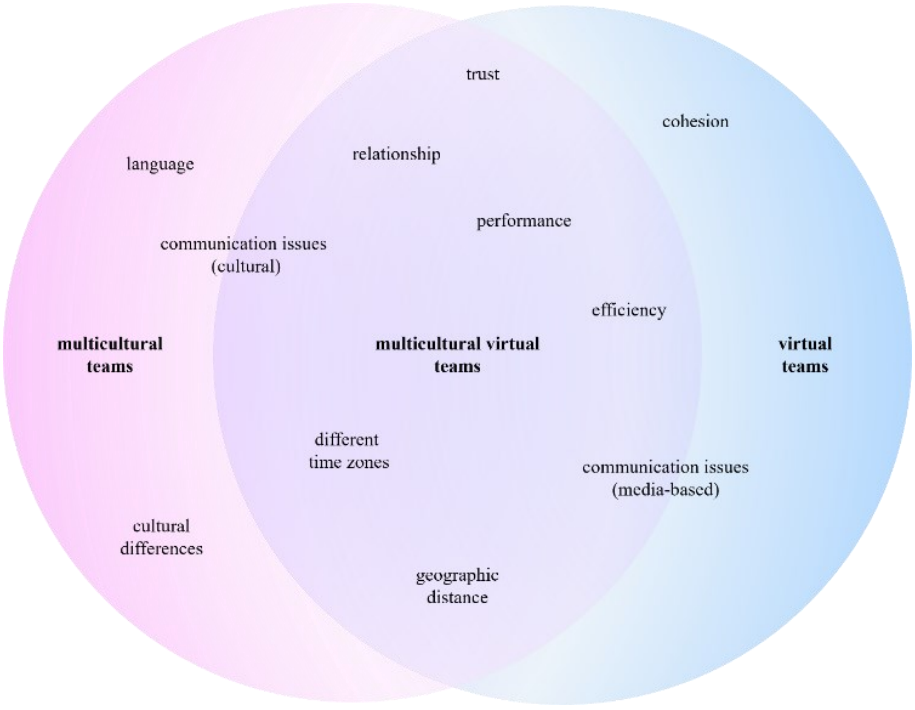
3. Results

The results consist of two parts. In part one, the various challenges will be described, as well as the necessary behaviour to face them. In part two, the traits, attitudes, and skills leaders of MVTs need to carry out the previously described necessary behaviour will be outlined.

3.1. Challenges and how leaders can behave to face them

Although all selected challenges affect MVTs, some are more characteristic of multicultural (e.g., language issues) or virtual (e.g., media-based communication issues) teams. Figure 1 shows the selected challenges and their assignment to multicultural, virtual, or MVTs.

FIGURE 1. CHALLENGES FACED BY MULTICULTURAL VIRTUAL TEAMS (MVTS)



Source: Author's own compilation, 2022

In the following, the different challenges will be explained in detail, and evidence-based resolution ideas will be presented.

3.1.1. Language

Imagine a multinational company where people from many different countries work together. Each team member speaks a different native language. Some have enjoyed an excellent language education since childhood and speak English fluently. Others have not had a good language education or have just started learning English and are acutely aware of the discrepancy between their abilities and those of some of their colleagues. For example, when engaging in a passionate discussion and trying to express your opinion or even follow their

viewpoint. Or when you have discovered a crucial mistake or come up with a great solution to a problem, but your vocabulary is insufficient to explain it accordingly. Or the feeling of being considered somehow more 'stupid' or less capable because you cannot express yourself appropriately. What would you expect from a leader? How would you act as a leader to overcome language insecurities within members of your team?

This brief selection of critical situations shows why language can be a fundamental challenge for multicultural teams. Misattribution is a serious problem when speaking a foreign language; language barriers can cause many misunderstandings. Team members who do not speak the team's common language well may be perceived as lacking ability, less dependable, and less trustworthy (CIPD, 2021). Speaking could trigger anxiety for individuals who perceive their language skills as insufficient (CIPD, 2021). A typical reaction of people affected by language barriers can be 'code-switching', which means switching from the common team language to one's own native language (CIPD, 2021; Harzing & Feely, 2008).

To avoid misattribution and to enhance mutual trust in employees' expertise, it can be helpful to focus on task-oriented communication (Han & Beyerlein, 2016; Kanawattanachai & Yoo, 2007). Task-related achievements of each team member can be highlighted in every meeting (CIPD, 2021). To avoid anxiety, leaders should guarantee a secure and inclusive environment that encourages open communication despite language barriers. Furthermore, it can be helpful to propose and approve English as the official language (CIPD, 2021). Leaders should be assertive to encourage employees to uphold language discipline, including guiding 'code-switchers' back to the shared language (CIPD, 2021). Using asynchronous communication could positively impact language accuracy because people have more time to process the message (Gareis, 2006). However, it can cause other communication misunderstandings because nonverbal signals are missing. More on this can be found in the section on media-based communication issues.

3.1.2. Cultural communication issues

Even in teams where all the members share a common language, cultural communication issues can arise. In an HBR article in 2013, Andy Molinsky, a Professor of Organizational Behaviour and International Management, reports the difference between people from the United States of America (USA) and the United Kingdom (UK) in their workplace communication (Molinsky, 2013). While Americans do not hesitate to promote and sell themselves all the time, this is a taboo for the Brits, who often describe their accomplishments as non-exaggerated and fact-based. Both might recognise each other either as pretentious or as inhibited. That is not the only difference between Americans and Brits. Molinsky also reports on the different ways of expressing emotions at work. It is common and expected to show enthusiasm in the USA, while in the UK, there is more emphasis on moderation and self-control. For Americans, an idea could often be 'great', while for Brits, it is 'not bad'. These different communication styles, rooted in different cultures, can lead to many misunderstandings, even when speaking a common language.

As Molinsky's examples visualise, communication issues are a significant challenge for multicultural teams beyond language (Gibson & Gibbs, 2006; Han & Beyerlein, 2016). Studies show that different culturally determining communication styles can lead to intercultural misunderstandings (Holtbrügge & Schillo, 2011; Monalisa et al., 2008; Shachaf, 2008). Members of multicultural teams have spent their formative years in different countries or

cultures and have accordingly learned different values and behaviours. This includes cultural nuances in communication, for example, remaining silent to respect the speaker (CIPD, 2021). A virtual environment can amplify these challenges and misunderstandings because many social cues are missing (Berg, 2012; Han & Beyerlein, 2016). More on this topic is discussed in the section on media-based communication issues. Some managers report that it can be challenging to adapt to the different needs of their team members, find the appropriate level of contact, and communicate concisely and empathetically (CIPD, 2021).

A leader should be aware of and understand different forms of communication (CIPD, 2021). This includes understanding cultural nuances and communication styles, being patient and sensitive, showing empathy, and ensuring active and attentive listening (CIPD, 2021). Leaders should enquire about the communication preferences of individual employees (e.g., due to language barriers, some feel more comfortable communicating in writing) and flexibly adapt to individual needs (CIPD, 2021). Allowing different types of communication is beneficial. For example, asynchronous communication could have a positive impact on reducing intercultural misunderstandings because the communication partners have more time to process a message (Gareis, 2006). Nevertheless, leaders should know that asynchronous communication via text- and audio channels can cause other communication misunderstandings because nonverbal signals are missing (see more in the section on media-based communication issues). Generally, the leader should establish binding norms for communication, considering the employees' practices and needs (Han & Beyerlein, 2016; Johansson et al., 1999).

3.1.3. Cultural issues regarding different values, expectations, and behaviour

Many people who experienced working in internationally operating companies or multicultural teams report irritating situations in negotiations or meetings with people from another culture. A typical example is the different negotiation styles between low- and high-context cultures. Information is explicitly and directly shared in low-context cultures, while in high-context cultures, information is implicitly shared (Meyer, 2014). Imagine a project team consisting of German and Japanese members. While the Germans from a low-context culture will try to come to the point, discuss the facts and want to directly find solutions, the Japanese from a high-context culture will practice ‘nemawashi’. It can be translated as ‘turning the roots’ and means that they do not take a decision directly, they will gather support and feedback first, and agreements are made within coalitions. The different styles of discussing and finding solutions can be irritating and challenging for both sides. As a leader, how would you act to find a common approach within the team so that everyone feels comfortable? How do you prevent stereotypical judgments among team members toward each other?

Cultural differences regarding different values, expectations, and behaviours make managing and coordinating MVTs extremely complex (Han & Beyerlein, 2016; Kayworth & Leidner, 2000). For example, norming and goal-setting processes can be complicated and challenging because the team members do not share the same beliefs and expectations to agree on common goals (Han & Beyerlein, 2016; McDonough et al., 2001). Generally, cultural and national differences reduce the team's ability to share ideas (Gibson & Gibs, 2006; Han & Beyerlein, 2016; Newell et al., 2007). In addition, the perception of cultural differences fosters the division into in-groups and out-groups, which reduces the flow of information and knowledge sharing (Gibson & Gibs, 2006; Han & Beyerlein, 2016; Newell et al., 2007), and complicates relationships within the team (Mc Donough et al., 2001), reduces trust, and affects the quality of decision-making processes (Chiu & Staples, 2013). In the worst case, the different

backgrounds and beliefs reinforce conflicts (Chiu & Staples, 2013; Han & Beyerlein, 2016; Polzer et al., 2006), as well as form critical racial and national stereotypes between the team members (Au & Marks, 2012; Han & Beyerlein, 2016). Misconceptions and stereotypes can undermine team members' ideas (CIPD, 2021). Therefore, it seems essential to counteract such stereotypes right from the beginning. Studies have shown that an improved cultural understanding enables employees to coordinate their activities more effectively and overcome stereotypical expectations. Moreover, according to Anawati and Craig (2006), most multicultural team members want others to be aware of their own culture.

To meet these challenges appropriately, the two basic principles in multicultural teams should be to respect people who are different from themselves and be sensitive to different values, attitudes, and experiences (CIPD, 2021). In this case, leaders have an essential role model function for their team members (Kronawitter, 2013). Accordingly, leaders must have this attitude and practice it to expect it from their team members. It is recommended to explicitly clarify the expectations about collaboration in the team (CIPD, 2020). This includes clarifying which leadership style is expected and appropriate (e.g., egalitarian or hierarchical, transactional or transformational), which communication method is preferred (e.g., written or spoken), as well as how meetings and the decision-making process should be organized (e.g., consensual, top-down, or something in between) (Meyer, 2014; Warburton, 2021).

Furthermore, it is recommended to establish binding norms for collaboration based on these findings (Han & Beyerlein, 2016; Johansson et al., 1999). The leader must ensure compliance. Team leaders must be flexible in dealing with different individuals independently and despite such agreements. This includes adapting the leadership style for different individuals, especially in one-to-one situations (CIPD, 2021). To prevent misconceptions and stereotypes, leaders must encourage themselves and their employees to suspend judgments about others until they have enough information about them, their cultural values, and whether these influence their behaviour (CIPD, 2021). The cultural understanding can be improved by encouraging team members to share their previous experiences with working in multicultural (virtual) teams (Han & Beyerlein, 2016; Pauleen, 2003), as well as actively explore different attitudes and perspectives to learn more about each other (CIPD, 2021).

3.1.4. Performance and efficiency

Challenges that already occur in face-to-face teams can become even more prominent in virtual teams. The reason is the lack of exchanges between meetings or over a coffee in a shared communal space. It is more challenging to ask quick questions or to suggest and discuss an idea. Accordingly, virtual teams require much more intentional planning of the desired goal and the appropriate type of exchange. Do you want to develop new ideas and concepts? Then it makes sense to organise a virtual coffee meeting where the team can chat and exchange ideas in a relaxed atmosphere. Do you have to achieve concrete project goals? Then it makes sense for the manager to give detailed briefings and distribute tasks to the team members. It becomes evident that in the virtual environment, the type of leadership must be used more consciously.

MVTs face more significant challenges in achieving project goals, staying within budget, and keeping on schedule than face-to-face teams (McDonough et al., 2001). Leadership is said to be a critical factor in the performance and effectiveness of virtual teams (Walther & Bunz, 2005). Ambiguous is the evidence on how specifically virtual teams should be led best (CIPD, 2020). For example, transactional leadership's strengths are coordinating the team better to

solve specific tasks and achieve more results. The strengths of transformational leadership are to develop vision, strengthen social cohesion, foster creativity, and improve the quality of results (Huang et al., 2010; Kahai et al., 2012).

These studies suggest that the best fitting leader must be selected, or the leaders must adapt their leadership style to the challenge faced by the virtual team. For example, task-oriented leadership is appropriate if the team's task is focused on quantitative output. Whereas if the team is working on innovative and high-quality ideas, the leader should be visionary and more responsive to the needs and concerns of the individual team members (CIPD, 2020).

3.1.5. Relationship, cohesion, and trust

Everybody knows the feeling of joining a new group of people. Especially in the beginning, there are many insecurities from all sides. It takes time to get to know each other and the internal codes and rules. In face-to-face situations with people speaking the same language and coming from the same culture, it usually does not take long to get a first impression, but it still takes some days and maybe weeks or months to get a thorough understanding. But imagine you are new to a virtual team consisting of people from many different cultures around the globe. How would you feel, and what do you think how much time it will take to get a feeling for each other? How can team leaders facilitate this process for their team members to work together effectively?

For MVTs, building relationships, cohesion, and trust is a significant challenge. Research shows that virtual teams' social cohesion is even more important than face-to-face ones. However, it is more difficult to develop social cohesion and build relationships in virtual teams because important social cues are reduced or absent in communication via electronic media (Lin, Standing & Liu, 2008; see also in the section on media-based communication issues). In addition, it is challenging for team members in virtual teams to develop a sense of roles and responsibilities unless they are explicitly defined for all team members (Warburton, 2021). Studies show that teambuilding activities are essential in virtual teams. They are even more necessary there than in face-to-face teams (Cordery et al., 2009; Han & Beyerlein, 2016; Sivunen, 2006). Further research points to the fact that in virtual teams, trust is more likely to be built among team members when information is shared promptly, and others respond appropriately (Kirkman et al., 2002).

To face these challenges, team leaders should initiate team building and role clarification at the beginning of the collaboration (Kennedy et al., 2010; Tuckman's Stages of Group Development, 1965; Warburton, 2021). In MVTs, this occasion can also be used to learn about the different culturally determined needs, attitudes, and behaviours. In addition, rules for cooperation can be established (see section cultural differences and section cultural communication issues). To foster trust, the leader can bring the team together regularly for ‘catch-ups’ and ‘hangouts’. These do not have to be work meetings only; they can also be social meetings (CIPD, 2021).

3.1.6. Geographic distance and different time zones

Imagine a team consisting of members, some living and working in Boston, others in London and Berlin, and some in Delhi and Tokyo. In this team, we have five different time zones, and while the day has just begun for some, it is already night for others. Perhaps this example seems extreme, but it is not unrealistic. As a team leader, how would you plan meetings and coordinate work schedules in such a situation? It is a big challenge on top of the other typical work issues.

Globally organised virtual teams, in particular, face challenges related to their geographical distance. Factors such as different time zones, unequal technological infrastructures (e.g., access to the internet, availability of technical devices), and different competencies of team members in dealing with technologies affect coordination and work processes (Cordery et al., 2009; Gibson & Gibs, 2006; Han & Beyerlein, 2016; Kayworth & Leidner, 2000). Working in different time zones hinders the exchange of tacit knowledge, social cues, and nonverbal signals via electronic media (Kankanhalli et al., 2006; see the section media-based communication issues section). Moreover, it is difficult for team members to understand the context and setting and how it affects their work when team members are far apart (Hertel et al., 2005). Probably the more different the cultures, the greater the challenge.

Identifying the best time intervals for team members to meet and synchronising their work schedules is a crucial coordination task for a leader of globally dispersed teams. The objective is to achieve the longest possible common working time frame, with the most extensive possible work hours overlap. The less time members spend working simultaneously, the more difficult it is to coordinate meetings and share information quickly (CIPD, 2021; 2020; Gibson & Gibbs, 2006). However, leaders must allow flexible working hours (CIPD, 2021). Further, they must ensure that members share location-specific information. This fosters a mutual understanding of underlying conditions (CIPD, 2020). They must also ensure that the team members have the minimum technical conditions to participate in team collaboration, including consideration of internet access and technical capabilities.

3.1.7. Media-based communication issues

During the COVID-19 pandemic, many companies abruptly switched their communication from face-to-face to online, which was a great challenge for many people, especially at the beginning when many technical infrastructures were still missing. The systems were overloaded, the internet connection was too weak, and the employees in their home office were not adequately equipped. Many felt left behind because the technology did not work well for them or they did not know how to use it. As a result, some were uncertain and frustrated, and others were angry or annoyed. Since most of us have probably experienced this situation, we know how important it is to meet these challenges right from the start.

Virtual teams depend on communication through electronic media, but various studies show that using electronic text- and audio-based communication media can hinder team processes and performance (Berg, 2012; CIPD, 2020; Han & Beyerlein, 2016). Furthermore, some studies show that the more electronic media is used, the less effective virtual teams are (Baltes et al., 2002; CIPD, 2021). This is because, through electronic media, less information is shared, information is less well understood and interpreted, and feedback is usually given with a delay. Furthermore, communication via text- or audio-based channels misses critical social cues and nonverbal signals, such as gestures, tone of voice, intonation, and attentiveness (CIPD, 2021; 2020; Maznevski & Chudoba, 2000). This can lead to misunderstandings and misinterpretations, disrupting team processes and performance (Berg, 2012; CIPD, 2020; Han & Beyerlein, 2016). The culturally related differences in communication doubly challenge MVTs (see more in the section on cultural communication issues).

Leaders should encourage using so-called ‘rich media’, such as videoconferencing, to improve productivity and effectiveness. It enables social cues and nonverbal communication, the immediate sharing of feedback and perspectives, as well as the quick resolution of differences.

All in all, videoconferencing can reduce textual misinterpretation (CIPD, 2021; 2020). It should be considered that videoconferencing can also be problematic in a multicultural context, especially in the case of language barriers. Accordingly, leaders must be sensitive to their team members and enquire about their needs (see the sections on language and communication issues). If leaders expect to use videoconferencing, they must ensure that team members have the minimum conditions to do so (CIPD, 2020).

3.2. Derived traits, attitudes, and skills for leaders

To execute the previously described behaviours, leaders should bring certain traits and skills to the job. Based on the findings of the previous part, these traits and skills were derived. First, leaders need *sensitivity*, *awareness*, and *empathy* to recognise cultural nuances, different communication styles, and uncertainties about language or technical issues among their team members. The *ability to listen actively* is equally crucial for this, as well as the attitudes of *respect*, *patience* and *understanding*. Furthermore, leaders should have a high level of *flexibility* and *adaptability* to respond appropriately to individuals, the team as a collective, and to technical and task-related challenges. To accomplish this, leaders should *master different leadership styles* (e.g., transactional and transformational leadership styles). As described in the previous section, clarifying expectations about the collaboration, team roles, and technical requirements at the beginning of the collaboration is helpful. To implement this, leaders need *personal initiative*, negotiation competence, and the *ability to encourage* their team members to share their needs and expectations. *Assertiveness* is vital to ensure that the derived and established rules are followed. In MVTs, it is essential to create an awareness of each other and prevent stereotypes. Therefore, important traits and attitudes of leaders are *openness*, *interest*, and *willingness to learn*. Leaders show this by constantly *enquiring* about their team member's needs, expectations, and requirements. Finally, leaders of MVTs should also have a high *sense of responsibility*, *reliability*, and a certain level of *media literacy* alongside their social and professional skills. Leaders should never forget that they have an essential *role model function*. They cannot expect their team members to do what they do not do themselves. Especially in MVTs, where many different types of challenges arise, leaders should keep this in mind.

Table 1 (next page) summarises the most important findings. It gives an overview of all challenges arising in MVTs, the required behaviours to face them, and derived traits, attitudes, and skills that leaders should bring to the job.

4. Discussion

This paper offers an overview based on scientific evidence from the literature and can provide helpful guidance for managers and recruiters. Nevertheless, it is not a universal scheme. Situational factors must always be considered. For example, on the topic of language, if the entire is proficient in French instead of English, then it makes more sense to communicate in French. Also, if a multicultural team operates only in a small market where most customers and stakeholders speak a common language that is not English, it may be more reasonable to agree to use that language instead. For example, in a private nursing service for older people in Germany, it is more practical for foreign employees to learn German because even with poor English, most customers would not understand them. Ultimately, it is always more important to adapt to the specific situation than to establish an 'ideal' yet an inappropriate solution.

TABLE 1. CHALLENGES AND REQUIRED BEHAVIOURS, TRAITS, ATTITUDES, AND SKILLS THAT LEADERS NEED TO FACE THEM

Challenge	Behaviours of leaders to counter challenges	Required traits and skills
Language	• Raise awareness of language barriers and consequences. • Communicate and operate task-oriented. • Provide psychological security. • Identify and improve 'poor English'. • Encourage to uphold language discipline. • Allow asynchronous communication if requested	• Assertiveness • Empathy • Flexibility • Openness • Reliability • Sensitivity
Cultural differences	• Show respect for people who are different. • Be sensitive to different values and attitudes. • Clarify expectations around collaboration. (e.g., leadership style, communication method, decision-making process). • Establish binding norms. • Adapt flexibly to different individuals. • Encourage everyone to suspend judgements. • Encourage members to share previous experiences. • Explore different attitudes and perspectives.	• Active enquiring • Active interest • Adaptability • Assertiveness • Being respectful • Flexibility • Master leadership • Negotiation • Personal initiative • Role model function • Sensitivity • Willingness to learn
Cultural communication issues	• Raise awareness of particular forms of communication. • Recognise cultural nuances. • Recognise cultural communication styles. • Enquire about communication preferences. • Adapt flexibly to individual needs. • Establish building norms for communication.	• Active enquiry • Active listening • Adaptability • Assertiveness • Attentive listening • Awareness • Creating norms • Empathy • Flexibility • Patience • Personal initiative • Sensitivity • Understanding
Relationship, cohesion, and trust	• Initiate team building and role clarification. • Organise 'catch-ups' and 'hangouts'. • Encourage the exchange of information.	• Assertiveness • Personal initiative
Performance and efficiency	• Adapt leadership style to the task and challenge.	• Adaptability • Flexibility • Leadership styles • Sensitivity
Geographical distance and different time zones	• Identify the best time intervals to meet. • Synchronise work schedules. • Allow flexible working hours. • Share location-specific information. • Ensure minimum technical conditions.	• Coordination skills • Flexibility • Encouraging • Sense of responsibility
Media-based communication issues	• Using 'rich media' such as videoconferencing. • Enquire about team members' needs. • Ensure minimum conditions.	• Media literacy • Sense of responsibility • Sensitivity

Source: Author's own compilation, 2022

Moreover, the literature review highlighted areas where conflicting findings exist. For example, some studies suggest using rich media such as videoconferencing to avoid misunderstandings due to the lack of nonverbal cues. However, other studies suggest asynchronous communication to allow more time to process a message. Ultimately, there is no single 'perfect' or 'universal' approach. Each MVT and, accordingly, each leader must find their own routine. They need to test different communication styles in different situations to understand which way is best for their given circumstances.

Many people report that language barriers are often the biggest problem in multicultural teams. Therefore, one of the most important tasks of a manager should be to create a psychologically safe environment, as well as to offer language courses to their employees. Companies operating internationally or with many internal and external intercultural relations should invest in intercultural training and language courses.

The interventions must always be reasonable and appropriate. Moreover, they should not be at the expense of other vital interventions or conditions. For example, encouraging language discipline should be reasonable and not at the expense of a safe environment.

Managers typically have many duties and responsibilities for many things. It can sometimes be challenging to do everything equally and appropriately during a stressful workday. It can be unrealistic to meet all individual needs and demands concerning intercultural or virtual issues. Of course, it is part of their job, but the responsibility also lies with the individual team members to be open-minded to intercultural and technical challenges and to show a willingness to change for the sake of the team and the company. It can also happen that the managers themselves are overwhelmed with multicultural or virtual issues. In this case, colleagues and team members should also be open and willing to help. Just because one person is in charge does not mean leaving that person alone with that responsibility.

However, leaders of MVTs should have sensitivity, flexibility, and active listening skills. These are essential skills and attitudes to understand people and situations and respond appropriately. This is possible even if you are in experiencing a stressful workday or have limited time available for detailed teambuilding interventions or discussions about rules.

5. Conclusion

A literature review was used to analyse both the challenges that arise in MVTs and the required behaviours to face them. From this, required traits, attitudes and skills leaders should bring to their job were derived to answer the research question 'which behaviour and skills do leaders need to manage MVTs successfully'.

The most significant behaviours that contribute to the successful management of MVTs are the following (i) raising awareness of language barriers and cultural differences, (ii) enquiring about team members' needs and expectations, (iii) clarifying expectations about the collaboration, (iv) establishing binding norms and ensuring compliance, (v) adapting flexibly to individuals and situations, (vi) using videoconferencing (instead of audio- or text-based media) and (vii) synchronizing work schedules. To evidence these behaviours, leaders of MVTs should have the following skills and attitudes (i) sensitivity, (ii) flexibility, (iii) assertiveness, (iv) personal initiative, (v) mastering different leadership styles, (vi) negotiation competence and (vii) active listening.

Table 1, presented earlier, provides an overview of the results from the literature review. Furthermore, Table 1 has practical use for leaders and recruiters. Leaders can use the table as a

helpful guide to appropriate behaviour for responding to specific challenges and circumstances. Recruiters can use the table as a valuable tool in selecting appropriate leaders for MVTs. Additionally, the findings of this literature review should form the basis for further exploration and investigation since research on the successful management of MVTs still needs to be expanded. New insights from organizational practice need to be integrated into existing research. Therefore, the topic is and will remain relevant to academics and practitioners.

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Key Considerations of Ethical Artificial Intelligence That Organisations Need to Consider for Success

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Abstract

It is argued that while Artificial Intelligence is far from having a consciousness like humans do, its consequences on society are minimal. Thus there is no rush to consider ethical issues. However, Artificial Intelligence applications are being implemented in almost every industry, imposing social unrest and upheavals for businesses. This paper aims to advocate for the importance and urgency of Artificial Intelligence ethics. This paper explores the different areas of ethics and then explains the concept of Artificial Intelligence ethics. A literature review is provided addressing four areas of Artificial Intelligence ethics that leaders must address if they are to win successfully in the industry in which they operate. These areas are biases, data security, explainability, and impact. A case study focusing on the company Strategeion is examined to illustrate the complexities of an Artificial Intelligence system in which a potential candidate for a job was discriminated against because of an error in its learning system.

***Keywords*:** Artificial Intelligence Ethics, Biases, Data Security & Algorithmic Accountability

1. Introduction

Scholars and business leaders agree that Artificial Intelligence (AI) is still in its infancy even though it has furthered its progress with technologies such as self-driving cars, medical diagnoses, and facial recognition. With the arrival of AI products, the world has progressed into a new era where machines are used to make decisions. They not only fulfil consumers' orders, but they use algorithms to make decisions. It has changed the way people react to AI products' decisions and what they expect from these products. In many cases, people unknowingly use AI to generate information based on their preferences and interests. These can come in the form of movie recommendations on Netflix, translations in Google Translate, or sales predictions in Customer Relations Management (CRM) systems (Ouchchy et al., 2020). AI-generated content can be beneficial; however, these recommendations and predictions are sometimes inaccurate. AI algorithms have flaws, especially when they do not have enough data or feedback to learn from (Ransbotham, 2018).

AI-generated content and decisions need to be checked by decision-makers. Discrepancies in terms of decisions will be illustrated in the presented case study. These kinds of inaccuracies might just result in an unpleasant user experience but can become disastrous when AI is used for critical and strategic decisions. Therefore, there is a need for the constant review of AI systems in terms of ethical knowledge, learning, monitoring and engineering. This paper considers the concept of AI ethics by referring to four schools of thought about ethics. These need to be addressed by business leaders to gain the trust of stakeholders when employing an AI system. The case study presented will consider how the trust in a reputable company, Strategeion, was damaged by an AI system they implemented. The unintended errors caused by this system show the importance of constantly monitoring AI systems to ensure that decisions made by these systems are accurate.

2. Literature Review

2.1. Ethics

The terms 'ethics' and 'morality' are often used interchangeably. Bartneck et al. (2021) define morality as a complex set of rules, values and norms that determine or are supposed to determine people's actions. In contrast, Dent (2012) defines ethics as the theory of morality. Dent (2012) further explains that it could also be said that ethics is concerned more with principles, general judgements and norms than with subjective or personal judgements and values. There are various schools of thought about ethics, and these are summarised in Table 1.

TABLE 1. CATEGORIES OF ETHICS

School	Interpretation
Descriptive Ethics	This category of ethics is the easiest to understand - it simply describes how people behave and/or what moral standards they claim to follow. Descriptive ethics incorporates research from anthropology, psychology, sociology and history to understand what people do or have believed about moral norms, i.e., different societies have different moral standards (Bartneck et al., 2021).
Normative Ethics	This category of ethics involves creating or evaluating moral standards. Thus, it attempts to determine what people should do or whether their current moral behaviour is reasonable. Traditionally, the field of moral philosophy involved normative ethics - several philosophers tried their hand at explaining what they think people should do and why i.e., "*this action is wrong in this society, but it is right in another*" (Timmons, 2020, p. 5).
Deontological Ethics	Österberg (2019, p. 2) notes that "*deontological ethics is characterised by the fact that it evaluates the ethical correctness of actions on the basis of characteristics that affect the action itself*." The term deontology or deontological ethics derives from the Greek word 'deon', which essentially means duty or obligation. Deontology can thus be translated as duty ethics.
Machine Ethics	According to Guarini (2013), machine ethics attempts to answer the question: what components would it take to build an ethical AI system that could make moral decisions? The main difference between humans making moral decisions and machines is that machines do not have 'phenomenology' or 'feelings' the way humans do. Machines, however, can process the data that represents feelings. Currently, no AI system or computer can feel and be conscious like a person (Dehaene et al., 2017). Life-like robots have been developed, but these robots do not possess phenomenal consciousness or actual feelings (Bartneck et al., 2021).

Source: Author's own compilation.

2.2 Areas of AI Ethics for Businesses.

Increasingly as the adoption of AI by businesses continues to grow, four main ethical questions need to be addressed. The four areas of ethical focus are bias, security, explainability and impact. This paper examines these areas because they are all relevant for improving a business's transparency and trust. A business capable of addressing these areas is perceived as credible in the market and among its stakeholders (Appen, 2021).

2.2.1 Bias

Bias is defined as a tendency (known or unknown) to have a preference for one thing over another, which lacks objectivity and influences an outcome (Sun et al., 2020). An example of this in the business world could be deciding to purchase raw material from a supplier simply because the supplier is a relative of the decision maker, rather than using another supplier who could also offer the same quality raw materials; an objective fact that the decision-maker simply chooses to ignore (Bird et al., 2020).

Defining, detecting, measuring, and mitigating bias in AI systems is not an easy task and is an active area of research. Several efforts are being undertaken across governments, non-profit organisations, and industries to enforce regulations to address bias-related issues (PriceWaterhouseCoopers, 2022). AI biases should not discriminate against people based on sensitive data including, but not limited to:

> personal data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs; trade union membership; genetic data, biometric data, data processed solely to identify a human being; health-related data; data concerning a person's sex life or sexual orientation.
>
> (Aysolmaz et al., 2020, Online).

Concerns of bias can become evident when the AI system accepts or rejects a person for a loan or a job, or it affects suggestions of the type of markets to participate in based on the person's personal data (Aysolmaz et al., 2020).

Table 2 highlights four ways of addressing AI biases.

TABLE 2: RESEARCH AREAS ON MANAGING AI BIASES

Research Area	**Solution to AI Bias**
Algorithmic Awareness	-Training and awareness programs to educate users about the uses of AI systems. -Raise awareness of the existence and causes of biases in AI systems.
Algorithmic Accountability	-Make decision-makers accountable when using AI systems. -Put into place policies that compensate individuals who have fallen victim to erroneous decision-making. For example, online retailers can make wrong decisions about the customer. Therefore, they would offer discounts on the next purchase to correct this. -Investigate black boxes through algorithmic accountability reporting.
Algorithmic Transparency	-Make algorithmic reports public. -Make AI systems more user-friendly. -Reduce algorithmic biases by detecting errors in the input data, which result in the wrong information.
Algorithmic Audit	-Establish audit methods for third parties to determine what algorithms are doing, as well as include the details of the suppliers of the algorithms.

Source: Aysolmaz et al., 2020.

2.2.2 Data Security

A common pitfall businesses face with AI is the lack of a data strategy or governance plan. Data used correctly can help businesses predict market trends and gain deeper insights into consumer spending habits. Typically, this kind of data is confidential and private. Safeguarding the privacy and confidentiality of large volumes of datasets is essential for decision-makers. This is especially important when the data is built into the AI system. In this scenario, attackers may launch inconspicuous data extraction attacks that risk the entire AI system. Another type of attack can come from smaller sub-symbolic function extraction applications or viruses which require less effort and resources. The consequence of data attacks is the loss of sensitive information, which can lead to significant reputational damage and financial losses and can be detrimental to the long-term stability of an organisation (IBE, 2018). Common types of leaked information range from employee/customer data, and intellectual property, to medical records. Over the years, data leaks have increased due to cyber-attacks and insiders leaking information.

Table 3 below lists some of the most significant data leaks businesses have experienced and displays the costs.

TABLE 3: MASSIVE ENTERPRISE DATA LEAK INCIDENTS

Organisation	**Personal Records ($)**	**Breach date**	**Type**	**Source**
Aadhaar	1.1 billion	March 2018	Identity theft	Malicious outsider
LinkedIn	700 million	June 2021	Identity theft	Malicious outsider
Facebook	533 million	April 2019	Identity theft	Malicious outsider
Twitch	7 million	October 2021	Identity theft	Malicious outsider
Nintendo	300,000	April 2020	Financial	Malicious outsider

Source: Tunggal, 2022

2.2.3 Explainability

Adopting an AI system would be successful if it can be explained, understood and trusted by customers and end users (Pásztor, 2018). Developing AI systems based on customer information is common, and customers will therefore want to be sure that their personal information is collected responsibly, handled, and stored securely. Some stakeholders will even want to understand the basics of how their data is being used. AI has evolved to a stage where humans increasingly interact with AI systems. In the workspace, employees will have to develop skills to work with, and make decisions using, AI systems. The following needs to be considered: the communication between AI systems and employees should be simple and easily understood. AI systems should present new discoveries from vast datasets in a presentable manner that business decision-makers understand. This type of information should help businesses to increase profits and attain a competitive edge in the market. It often takes years to collect and process data before it can be analysed. As such, it is essential that the analysis is carefully planned and executed and that any general feedback about the performance of the AI system and its learning process is not lost between studies. AI models should be able to provide

an interpretation of datasets. An AI system that works with an employee instead of replacing the employee is preferred (Pásztor, 2018).

2.2.4 Impact

Before any business can decide to implement an AI system. They should investigate the following ethical questions around impact:

- What is my model intended to do?
- What impact will my model's creation have on my business, the people who build my model, my end users, and society?
- What happens when my model makes the wrong decision?

These questions will drive a business to develop an AI model with a net positive impact on all relevant stakeholders. However, avoiding these questions or responding to them inaccurately could result in unintended consequences. An AI system that performs poorly may make discriminatory decisions—for example, AI-powered recruiting tools that show bias against women or facial recognition software that has trouble recognising darker-skinned faces (Appen, 2021).

3. Case Study: Strategeion

3.1. Background

The non-profit company, Strategeion, was founded by a small group of army veterans after having been honourably discharged during the 2008 recession. Strategeion's business model was to help veterans by providing them with job opportunities and support. The veterans were a group that was hit hard by the recession. Since tech companies were appointing recent young graduates from prestigious universities, it was difficult for the veterans with an Information Technology (IT) background to apply for positions, and therefore they found it difficult to fit into civilian life. The IT veterans built on their background of programming experience supporting various military operations with IT expertise. They created the company to enhance the lives of other veterans by creating an online platform that would enable veterans to stay in touch with each other and share their experiences about civilian life. The co-founders had witnessed how problems such as poverty, joblessness and homelessness affected many American communities during the economic downturn. The founders were searching for a technical solution for these problems and vowed to develop services, platforms and technical solutions for the benefit of all. As the company matured, the platform expanded to include a range of services - from social networking to personal blogging and even a location-based search application that helped individuals to move to new communities and to discover local points of interest. The vision for their company was to 'leave no man behind'. Strategeion believed that the best way to fulfil its pledge was to make its source code freely available to the public. Their logic was that the code would help others to serve their own communities with probably different requirements. They felt that making the code open source would provide a means of transparency and public accountability (Princeton University, 2018).

3.2. The Problem

Strategeion enjoyed low turnover rates from veterans and a satisfied workforce as they adjusted well to civilian life. In recognition, Strategeion was listed in Wealth Magazine as one of 'The Pop 100 Companies to Work For In 2013'. This resulted in a surge in job inquiries and applications from the public. The surge of applications outpaced the number of positions, and the Human Resource (HR) department was increasingly overwhelmed by these applications. In their internal communication board, HR complained about the volume of applications and that

it was affecting their workflow as they could not complete other work tasks. The leaders interpreted this as a call for help. After exploring several options, the team decided to implement an AI system that employed the use of natural language processing and machine learning to deal with the influx of applications. The leaders expected that the AI system would ease their problem by implementing clever technical tricks to automatically pre-sort resumes according to a candidate's desirability, optimising especially for a projected 'fit' within the company. The AI system was referred to as PARiS. To train the system, HR worked with engineers by giving several resumes from current and previous employees whom they deemed were exemplary or poor fit according to the work and culture of these employees. PARiS would rate incoming resumes according to their match with the ideal types and cast aside those below a set threshold. Over the coming weeks, HR was relieved of the volume of applications as PARiS automatically selected the best candidates. It was consistent and efficient and seemed to represent the company's values by looking for the best fit.

Hara, a promising candidate with a disability who was devoted to computer science, applied for a position at Strategeion; however, she received an automated rejection from the PARiS system within hours of her application. She was surprised since she felt she was the perfect candidate for the role. She felt her application displayed a strong academic background, civic duties, and work experience with non-profit organisations. She was unsatisfied with the outcome and requested further feedback from the company. The request was received by HR, which upon review, noticed that she was indeed a perfect match for the role. Hara's case was used to review PARiS and to investigate the reason for the system's rejection of Hara's application. One concern was that PARiS may have used Hara's disability status as a reason to reject her application. However, the system's engineers assured HR that they had explicitly designed the algorithm so that it would not discriminate against such categories. Upon further investigation, they found that the system required candidates to participate in some or other sport and that it was probably why PARiS rejected Hara's application. Engineers found that the PARiS system highly evaluated athletics and military service participation. Given the overrepresentation of veterans among Strategeion's employees and their tendency to excel at the company, PARiS had learnt to connect a history of playing sports with a 'good fit'. While it was true that many of Strategeion's ex-military employees no longer participated in sports, their resumes typically reflected a history of having done so. Hara had no history of sports on her resume (Princeton University, 2018).

3.3. Outcome

In keeping with the values of honesty, an HR representative reached out to Hara with the findings. He explained about the implementation of the AI system and how it had learnt patterns to select the most promising candidates in the recruitment process. He admitted there were still some bugs in the system. He apologised on behalf of the company and invited Hara for an interview. He assured her that they would work on the shortcomings of PARiS. This did not pacify Hara, who was appalled that Strategeion had delegated recruitment, an area that could have a profound impact on her life prospects, to an AI system. Furthermore, she felt that system had discriminated against her. She blogged about the company's response on her personal website, where her followers joined in the discussion about the AI ethical concerns surrounding PARiS.

3.4. Discussion of the Case

A job influences a person's income, housing choice, family size, health aid options and other essential life (Hasan et al., 2021). Decisions about who is awarded a job may not have life-threatening consequences but can significantly impact the individual applying for the job. Hara believed that her life prospects would be significantly improved by joining Strategeion and was

therefore upset by the idea of an AI system deciding her fate. She argued in her blog that human intervention is necessary for such a decision. When human agents reject worthy applicants, they may feel regret. An AI system, on the other hand, feels none of this. Instead, the system applies cold calculations to data to determine access to a scarce resource (e.g., jobs).

Hara was shocked to learn that an AI system reviewed her personal information without her consent. As current and previous employees of Strategeion learnt how PARiS functioned, they were also upset that their personal information might have been used to train the system. Strategeion's use of its employees' personal information for unexpected and undisclosed purposes left them open to allegations that they had violated privacy norms and standards.

Hara had rejected the call for an interview and instead filed an official complaint with the company. The board received and handed this over to their legal team. They had to ascertain whether they committed any legal wrongdoing by using employees' personal information without their consent and whether PARiS contravened the United States anti-discrimination law. If PARiS was coded to discriminate against candidates with disability status, then Strategeion would have most certainly violated the law. However, the investigation showed this was not intentional and was instead the result of redundant encoding, which allowed it to infer such erroneous results from the data. Therefore, the lawyers believed Strategeion had not violated any laws.

4. Recommendations and Future Research

Strategeion had, throughout its history, promoted the notion of fairness through its positive approach to recruiting employees from a group that other companies did not easily select. Despite the leader's approach to hiring these veterans, they had to acknowledge that PARiS eventually failed to live up to the company's values. They would need to find a way to evaluate all applications fairly. A possible solution would be to integrate PARiS with human intervention. An individual trained to spot biases and screen the applications with PARiS would eliminate or prevent a similar future occurrence. Engineers would need to monitor how PARiS learns by sampling the data and processing its uses regularly.

Not much literature is devoted to AI ethics (Eitel-Porter, 2021). This is an area that is still in its infancy. Future work should be devoted to understanding morality and ethics and how they can be implemented in AI systems. AI systems simply use algorithms and calculations based on the data that it is given to present results. As was shown in this case, humans' trust in AI systems' ability to make decisions is more complex. Humans still prefer humans to make decisions, especially decisions that may significantly impact their future.

This paper analyses AI ethics using a qualitative methodology by reviewing various literature and business articles. Some of this literature can be found in reputable journals such as Natural Machine Intelligence, Frontiers in Robotics and Artificial Intelligence and Foundations and Trends in Machine Learning to name a few. For instance, the article reviewed 70 international ethical guidelines and presented four key areas common in existing guidelines. These are values, big data and algorithms, inadequate understanding of AI ethics and values related to transparency and data security (Franzke, 2022). From a corporate perspective, IBM (2022) presents three key insights in their report. These are: business leaders are champions of AI ethics, which grew from 15% in 2018 to a staggering 80% presently. Secondly, more than half the organisations in the report have taken steps to embed AI ethics in their systems. Finally, diversity and inclusion issues are still not well represented, which is essential for mitigating biases in AI. Therefore, corporations have a limited approach to the ethics of AI. A possibility for future research could include a quantitative study on the opinions of decision-makers that

rely on AI systems. A study can also be performed to test the validity and reliability of AI systems.

5. Conclusions

The paper advocates for the need to increase research and understanding of the ethics of AI. Evidence had been provided by various examples such as data leaks, supply decisions and through the case study. The case showed that more knowledge is required about AI to support the decision to implement an AI system, along with the possible pros and cons of using such a system. The potential threats and opportunities must be well thought through before implementing a system. A clear strategy that is drawn from the company's vision is needed before the use of AI should be considered. Constant learning and monitoring of AI are required to overcome the effects of biases and unforeseen circumstances.

The business world is increasingly moving towards adopting AI, and while AI will not immediately replace all jobs, people will increasingly have to interact with AI. In the workplace, learning intervention will be required to upgrade a worker's skills so that AI becomes accessible and user-friendly. The consequences of not doing so can result in loss of employee and customer trust and faith. A clear articulation of the business strategy must be embedded within the AI system and considered within the values and culture the business operates with.

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The Analysis of a Survey of Adult Skills (PIAAC): The Status of Female Leadership in Higher Education in Kazakhstan

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Abstract

This is a pilot study written prior to undertaking a doctoral dissertation on the state of female leadership in Kazakhstan. The paper analyses variables from the Survey of Adult Skills of the Programme for the International Assessment of Adult Competencies (PIAAC). The data for PIAAC was collected in 2017 in Kazakhstan. The author of this study used publicly available databases. This study aims to understand who occupies leadership positions in Kazakhstan and what variables influence the people who become leaders. Statistical tests were conducted to estimate how gender, skills, level of education, and family background influence leadership. Research results indicate that instead of gender, literacy, numeracy, and ICT skills are important for leadership. The country's statistics show that in comparison to other occupations, the number of female leaders is relatively high in the education sector. Therefore, the results of this pilot study are being expanded into more detailed and substantial doctoral research, analysing factors that influence female leadership in the higher education of Kazakhstan. This empirical research adds findings to existing data of the Central Asian context, particularly in gender studies and leadership fields.

***Keywords*:** PIAAC, gender, education, skills, leadership, Central Asia, Kazakhstan.

1. Introduction

Men and women have distinguishable and irreplaceable roles in society. International development policies recognise gender equality, sustainable development, education, and leadership as mutually supportive pillars (Bistrom & Lundstrom, 2021; UNESCO, 2016). It is important to explore the various factors that affect decisions to pursue leadership careers for both genders so that those factors do not hinder anyone from achieving their professional potential because it is a fundamental human right and natural desire to develop and progress.

Gender studies are very important in countries where, historically, the issues of gender equality differ from the Western understanding of the discourse. According to Kireyeva et al. (2021),

pure Muslim countries are less open to adopting the Western idea of gender equality. Therefore, pure Muslim countries face more issues achieving international gender equality standards than countries in the West.

The importance of gender equality is evident in Central Asia (Kandiyoti, 2007). Kazakhstan, closest to Russia, a Central Asian post-Soviet country, has mixed religious views. Historically, men and women in Kazakhstan have had equal opportunities to receive education, thus leading researchers to name Kazakhstan a 'gender paradox' because, despite the high literacy levels of both genders, gendered norms still exist in the society (Durrani et al., 2022). These norms reflect women's careers (Almukhambetova & Kuzhabekova, 2020).

Kazakhstani females are influenced by the education and culture of the country. The analysis of several textbooks from public schools indicates that ideal Kazakh females are mothers and nurturers compliant to their cultures and husbands, who are fearsome and knowledgeable protectors and leaders, predominantly in the STEM fields (Durrani et al., 2022). Women are discouraged mainly by their family members to pursue STEM or leadership careers so as not to threaten their husband's masculinity and are advised to choose more "feminine" occupations (Almukhambetova & Kuzhabekova, 2020). Therefore, lower positions in agriculture, industry, education, public health service, and public administration are popular among them (Kireyeva et al., 2021). According to the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan Bureau of National statistics (2019), the gender statistics for various professions are the following:

TABLE 1. THE SHARE OF WOMEN AND MEN IN DIFFERENT OCCUPATIONS IN THE CITIES OF KAZAKHSTAN

Occupation	Year	Women (%)	Men (%)
Ministers	2019	5.8	94.2
Political civil servants	2019	7.0	93.0
Security forces leaders	2019	2.1	97.9
Small and medium enterprise leaders	2019	23.9	76.1
Members of the board of the National Bank	2019	25.0	75.0
School, technical and vocational education leaders	2019	38.3	61.7
Higher education leaders	2019	24.1	75.9

Source: Author's own compilation

From the statistics in Table 1, it is clear that Kazakhstani women are underrepresented in leadership positions; however, there are more female leaders in the education sector compared to other fields. As a part of a country-based gender analysis for the OECD, Dubok and Turakhanova (2017) explain that education is considered a feminine profession in Kazakhstan since it is perceived as a nurturing profession.

Some existing research from Kazakhstan explains the phenomenon of female underrepresentation in leadership positions. On the one hand, there are perplexing complexities of traditional, Soviet, and Westernised neo-liberal expectations (Kuzhabekova & Almukhambetova, 2017). Whilst the Soviet regime tried to build an image of women as mothers

and successful workers, in present-day Kazakhstan, most cultural assumptions of women only as caring mothers and wives remain largely unchallenged (Kakabadse et al., 2018). Existing research shows that female civil servants do not aspire to leadership because they lack self-confidence in their skills and ability to strategise. Their choices were profoundly affected by the largely shared cultural belief that women are good at paying attention to details but fail at strategising (Kuzhabekova & Almukhambetova, 2017).

The state of female leadership in Kazakhstan can be explained by the historical development of leadership in the country since it is a post-Soviet state where the general leadership style is characterised as 'masculine': transactional leadership, which focuses on command-control and emphasises rules and regulations; in the meantime, women are characterised by transformational actions: offering support, encouragement, empowerment, and engagement to the team (Eagly & Carli, 2003; Fine, 2009). Hence, historical and cultural factors resonate in the perception of effective leadership and reflect in women's occupational choices, which result in a lack of female leaders (Gill & Negrov, 2021; Kuzhabekova et al., 2018; Mukhazhanova, 2012).

2. Literature Review

On a global scale, diversity in leadership is integral for organisational growth (Roberts, 2007). International researchers have discovered an interesting interrelation between gender, education, skills, and the labour market using the Survey of Adults Skills (PIAAC) (Chiswick et al., 2003; Green & Riddell, 2011). Literacy and numeracy have a tremendous impact on earnings and stand for approximately 1/3rd of the returns on education. Although education has more influence on earnings than work experience, labour outcomes are dependent on individual skills. Better education produces better skills, which in turn have positive rewards from the labour market, such as opportunities to reach a senior rank or earn a higher salary (Chiswick et al., 2003; Green & Riddell, 2011). From a gender perspective, women's labour is more sensitive to human capital investment (Yao & van Ours, 2015).

Similar studies on this topic with an analysis of big data have been completed in the Asian context. In Japan, skills do not depend on variables such as gender, age, parental education, or experience, whereas in Korea, they do (Lee & Wie, 2017). In China, language literacy skills positively affect individuals' income and employment. However, English language skills have proven to have more benefits for professionals in the labour market (Zhou et al., 2020).

While a few studies with an analysis of big data explore how education, skills, and gender reflect labour market outcomes, the gender and leadership variables have received the least attention in all big data analyses. To the author's knowledge, no PIAAC database analyses have been completed to understand the gender and leadership dynamic in the labour market of Kazakhstan, which makes the field fruitful for exploration.

2.1. Individual Micro-Level Factors

Women's proactivity and personal drive towards leadership play a crucial role in their professional lives. However, some women doubt their intellectual abilities and skills or simply might not desire additional leadership responsibilities due to a lack of energy and time. At the same time, men have expressed more confidence about reaching leadership positions in academia (Baker, 2010; Calizo, 2011). Women related their hesitations to having to juggle their

family and professional lives, whereas men were most concerned about professional and institutional influences on their leadership journeys (Wendler et al., 2012).

Nevertheless, a positive personal attitude towards leadership is not a straightforward issue. At the individual micro level, women perceive leadership as an endeavour of men and distance themselves from it. For example, female Chinese academicians separate any kind of leadership identity from their personal goals because it contradicts accepting themselves as women (Zhao & Jones, 2017; Sallee et al., 2016).

For women, the issue of identity is complicated because, depending on the context, women may have conflicting societal roles (Adams, 2009; Davies et al., 2005). They might take charge of most household issues leading to the view that an academic leadership career seems unrealistic in balancing family and professional issues (Adams, 2009). Female academic leaders perceive themselves as 'naïve', 'having misconceptions', and 'being green' because they have not anticipated their leadership path (Dunn et al., 2014). Women more than men choose against an academic leadership career because they doubt they can balance work and life responsibilities (Baker, 2010; Calizo, 2011; Kameshwara & Shukla, 2017; Sallee et al., 2016; Vasquez-Guignard, 2010; Zhao & Jones, 2017).

Research on female academic leaders has revealed self-awareness as a critical component of leadership. To become successful leaders, women must be aware of their values, priorities, skills, and self-perception and be willing to take opportunities (Airini et al., 2011; Cubillo, 2003; Dunn et al., 2014; Thornhill, 2011; Vicary & Jones, 2017).

Female leaders believe that rather than work-life balance, the skill to manage things harmoniously is crucial to success (Thornhill, 2011). Transferable skills and the ability to lead the team by utilising their passion and energy to bring positive organisational changes are vital for female leaders (Scott, 2018).

2.2. Personal Meso-Level Factors

Having a family is very important in many female leaders' lives. However, women share the constant juggling between two spheres: familial and institutional responsibilities, since both require much of their time, effort, and attention (Devine et al., 2011; Probert, 2005; Kamau, 2006; Kim et al., 2010; Moultrie & De la Rey, 2004; Raddon, 2002).

Depending on how the work-life balance situation is managed, the presence of children may hinder or motivate women's leadership careers (Airini et al., 2011; Ledwith & Manfredi, 2000; Sallee et al., 2016; Vasquez-Guignard, 2010; Wendler et al. 2012). Some women say they succeed as mothers and leaders due to the intelligent management of their responsibilities (Thornhill, 2011). Some educational leaders had to give up their career progressions because motherhood influenced their health (Airini et al., 2011). While female academics refer to the sense of constant guilt of not spending enough time either on their work or on their children, male academics mainly refer to the pride of being a father (Sallee et al., 2016).

Support has been distinguished as an important factor for women before entering leadership careers in academia (Edson, 1981; Sperandio & Kagoda, 2008; Young, 2001). Mothers are the greatest role models for women, supporting and inspiring them, especially if they themselves are leaders in the educational sector (Gross & Trask, 1976; Young, 2001). The fathers' encouragement gives women leaders self-confidence and determination (Thornhill, 2011). Spousal support is somehow different, though. A woman's decision to pursue a leadership career in academia is positively affected if their partner shares the domestic responsibilities and is willing to relocate if needed. On the contrary, if women do not have family, friends, and

spousal support, they are less willing to enter educational leadership careers in the first place (Sperandio & Kagoda, 2008; Young, 2001). Nevertheless, an interesting trend can be observed by different generations of women: while senior women divulge that the burden of domestic work, child-rearing, and a husband's occupation limited their decisions to pursue leadership careers in academia, the younger generation of female academic staff did not consider their partner's job as an influencing factor on their leadership aspirations (Ledwith & Manfredi, 2000).

2.3. Institutional Meso-Level Factors

On the global scale, women are more likely than men to aim for faculty positions at comprehensive universities, community, or liberal arts colleges, while white men are more likely to reach the professoriate (Golde & Dore, 2001). However, minority female doctoral students desire to reach a leadership position when they have faculty members who support them (Burciaga, 2007). It is difficult for minorities to pursue leadership positions because of the need to blend in at an organisation, not only in terms of academic practices but in organisational cultures, including daily language, gender roles within the faculty, and institutional policies for families, like the presence of maternity leave or childcare facilities (Vasquez-Guignard, 2010). Women do not enter academia aspiring to leadership; instead, they decide to pursue this goal during their studies. Various factors influence this decision, including the supervisors' support and mentorship. For women, if the role of a PhD supervisor and a mentor coincide, future career opportunities become more prominent (Devos, 2004; Manathunga, 2007; Meschitti & Lawton-Smith, 2017; Weidman et al., 2001). They do not learn how to navigate academic careers when they do not obtain enough career coaching, which plays a crucial role in forming their leadership identities (Lindén et al., 2013; Manathunga, 2007).

Research describes the 'good old boy's club' as an informal network that women rarely have access to. Top management often consists of males, who create their own communities for socialising, which may include gathering together for activities outside the workplace. Women, especially those with families, rarely get invitations to join (Nielsen, 2017; Pringle et al., 2017). Nevertheless, if women can get involved in these informal networks and possess the skills needed for successful leadership, they will most likely advance in their careers (Scott, 2018). Interestingly, senior female professional leaders are more aware of these types of subtle discrimination practices at workplaces, whereas younger generations of women rely on a more meritocratic approach rather than considering the gendered division of labour (Ledwith & Manfredi, 2000).

With the rising concern about gender equality in the workplace, numerous authors have discussed the effects of organisational culture on female academic leadership (Airini et al., 2011; Cubillo & Brown, 2003; Sperandio & Kagoda, 2008). Women in education share a mismatch between their gender perception and expectations as a leader. On the one hand, they are expected to be 'feminine': caring, nurturing, and empathetic. On the other hand, they should exhibit "masculine" behaviours: a logical, competitive, and administrative style of governance (Sperandio & Kagoda, 2008). Women leaders have to be different, but not too different from what is accepted as the norm in an organisation; too much femininity is considered unsuitable for leadership (Billing, 2011; Cubillo & Brown, 2003). This attitude towards women can be

classified as the invisible rules in academia, a lack of clarity in what universities are looking for in leaders and how these leaders should act (Airini et al., 2011).

2.4. Macro-Level Factors

Women's careers have been shaped by gendered cultures in and out of academia, from their childhood, upbringing, family roles, and society (Kameshwara & Shukla, 2017; Ledwith & Manfredi, 2000). The culture of the gendered division of labour is a historical heritage. As Sokoloff (1992) states, elite professions, which required higher level education, were mainly occupied by white men, whereas women occupied semi-professions that did not require sophisticated knowledge. The reasons might include choosing professions with flexible schedules or a part-time workload due to family responsibilities, personal occupation preferences, or avoiding workplaces where males outnumber females (Parker, 2015). Interestingly, men themselves or women working in strongly 'male' occupations deny the existence of gendered cultures (Kameshwara & Shukla, 2017; Ledwith & Manfredi, 2000).

3. Method

This study aims to examine what factors affect Kazakhstani women to hold leadership careers concerning education, family-related factors, skills, and gender by analysing the PIAAC database on Kazakhstan.

The PIAAC database is the outcome of The Programme for the International Assessment of Adult Competencies by the Organisation for Economic Co-operation and Development (OECD). The data for Kazakhstan was collected from August 2017 to April 2018 and comprised 6050 adults aged 16-65. The survey provides rich data about respondents: skills they use in their everyday lives, education levels, linguistic and social backgrounds, participation in the labour market, as well as well-being.

For this study, the author used the following domains from the PIAAC database:

(1) Literacy – the ability to understand and respond appropriately to written texts;
(2) Numeracy – the ability to use numerical and mathematical concepts;
(3) Problem solving in technology-rich environments – the capacity to access, interpret, and analyse information found, transformed, and communicated in digital environments.

Hence, to understand factors that influence leadership, the author has chosen variables which were mentioned in the literature as affecting leadership:

(1) Activities - Last year - On-the-job training - Count
(2) Education - Highest qualification - Level
(3) Skill use work - Literacy - (all variables in the database)
(4) Skill use work - Numeracy - (all variables in the database)
(5) Skill use work - ICT - Computer - (all variables in the database)
(6) Background - Children
(7) Background - Age of the child
(8) Background - Number of children
(9) Gender

4. Results

To understand the underrepresentation of women in leadership positions, it is first necessary to see the statistical significance of whether the variables of gender and leadership are correlated. Hence, occupational choices from the PIAAC database were manually marked as 'leadership' and 'non-leadership' and tested for their relationship to the gender variable.

Overall, there were 3600 valid cases for this analysis. Running the chi-squared test gave a p-value of 0.178. Using the 0.05 cut-off point, the correlation between gender and leadership variables is not statistically significant. This finding contradicts the general statistics on leadership and gender in Kazakhstan presented earlier in this paper. The statistical data on leadership in Kazakhstan shows the disproportion of males and females in leadership, meaning that leadership and gender are correlated.

Since the analysis of the PIAAC database has shown that reaching leadership positions does not depend on someone's gender, the next focus was on exploring other factors. The literature proposed those factors to be education, skills, and family-related issues.

To see if occupying leadership positions depends on these variables, the researcher ran the binary logistic regression on the variables 'leadership' and the highest level of education, skills used at work (literacy, numeracy, ICT), and all family-related factors in the PIAAC database.

TABLE 2. BINARY LOGISTIC REGRESSION OUTPUT ON THE LEADERSHIP VARIABLE.

Variable name	df	Significance level	Exp (B)
Literacy - Reading financial statements	1	0.011	1.200
Numeracy - Using a calculator	1	0.025	1.170
ICT - Computer - How often - Programming language	1	0.024	0.851
How often - Planning other activities	1	<0.001	1.731

Source: Author's own compilation

The variables above are the ones that affect leadership. Since gender does not seem related to leadership, the next step was to see whether the variables affecting leadership connect to gender. Using the cross-tabulation in SPSS for the variable gender and variables affecting leadership revealed interesting results.

TABLE 3. BINARY LOGISTIC REGRESSION OUTPUT ON THE GENDER VARIABLE.

Variable name	Males (N)	Females (N)
Literacy - Reading financial statements	243	417
Numeracy - Using a calculator	425	883
ICT - Computer - How often - Programming language	85	139
How often - Planning other activities	335	395

Source: Author's own compilation

Although gender and leadership variables have shown no statistically significant relationship, the variables that affect leadership are primarily used by women. More women read financial statements, use a calculator, and use programming languages than males daily. However, almost an equal number of females and males plan others' activities daily.

5. Discussion

The author used the PIAAC database on Kazakhstan to understand what influences leadership in the country. The professions in the PIAAC database were manually categorised as 'leadership' and 'non-leadership'. As suggested by the literature, variables on literacy, numeracy, ICT, family background, gender, education, and activities were selected from a range of PIAAC data on Kazakhstan.

The study's results clearly indicate gender differences in literacy, numeracy, and ICT practices, which influence leadership positions as predicted by existing studies (Chiswick et al., 2003; Green & Riddell, 2011; Yao & van Ours, 2015). In particular, skills such as reading financial statements, using a calculator, or knowing a programming language have the most prominent influence. The findings support earlier research regarding the relationship between labour market outcomes and individual skills and education (Green & Riddell, 2011; Lee & Wie, 2017; Zhou et al., 2020).

In this study, gender was not a factor that impacted leadership. The findings contradict the existing research on Kazakhstani leadership and the skills that impact it, where the correlation of these variables was noticeable (Kuzhabekova, 2017; 2021). However, the study's results support the research from the Korean context (Lee & Wie, 2017), where skills are related to one's gender.

In light of the results, it could be an important issue to consider the relationship between gender and leadership in a more detailed study since the results of the PIAAC database analysis do not align with prior data on gender and leadership in Kazakhstan. The open question is why more women use workplace skills that influence leadership but are still underrepresented in senior ranks. Although the big data analysis could not answer this question, the explanation is found in qualitative research by Kazakhstani scholars. Women are underrepresented in leadership because of the explicit male-centric views of leadership (Kuzhabekova & Almukhambetova, 2021).

Some weaknesses of the current PIAAC measurement instruments should be mentioned. First, the analysis was not specific enough about gender differentiation in leadership. Secondly, leadership practices cannot be examined and explained in more detail than the occupation names in this database. For these reasons, it is difficult to identify specific practices related to gender in leadership. Hence, the author decided to follow up on this study in a broader context, expanding the research theme in a doctoral dissertation.

6. Implications

According to the statistics of the country's higher education sector, women represent 64% of all faculty members.

TABLE 4. IMPORTANT RATIO OF WOMEN AND MEN IN HIGHER EDUCATION

Occupations	Women (%)	Men (%)
Full-time faculty	64	36
Faculty with a master's degree	75	25
Faculty with a Candidate of Science degree	62	38
Faculty with a Doctorate of Science	41	59
Faculty with a PhD degree	53	47
Faculty at the rank of professor	36	64
Faculty at the rank of associate professor	55	45
Bachelor's degree students	56	44
Master's degree students	60	40
PhD students	62	38
Rectors	15	85
Vice-rectors, deans	35	65

Source: Lipovka, 2018

The latest available information from the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan Bureau of National Statistics (2019) shows that a 24% share of all academic top management positions in higher education belongs to women, while men are 76%. The numbers from previous years are also similar.

TABLE 5. THE RATIO OF WOMEN AND MEN IN THE HIGHER EDUCATION SYSTEM AT THE EXECUTIVE LEVEL IN KAZAKHSTAN

Year	2012	2013	2014	2015	2016	2017	2018	2019
Women (%)	16.7	15.6	14.1	14.4	19.0	15.0	20.5	24.0
Men (%)	83.3	84.4	85.9	85.6	81.0	85.0	79.5	76.0

Source: Agency for Strategic Planning and Reforms of the Republic of Kazakhstan Bureau of National Statistics, 2019

Kazakhstani female faculty members are as educated as men; however, the ratio of women and men at the academic leadership level (rectors, vice-rectors, deans) is unequal. This leaves an open question "What keeps females from reaching leadership positions?"

Research on social justice in educational leadership suggests analysing actions at the micro (individual), meso (district/community), and macro (state) levels to oversee failure and success at each to create a truly equitable educational process (Bogotch, 2002; Brown, 2004; Dewey,

1909). Therefore, the author decided to expand the existing research into a doctoral thesis, with the research question: What factors affect females' decision to pursue leadership careers in higher education at the individual micro-, personal meso-, institutional meso- and larger macro-levels?

7. Further Research

Numerous research has shown an expansion of academic parameters, which has not led to clear boundaries between academic identities and terms. University careers are classified as academic staff (academic, non-managerial), academic leaders (academic, managerial), professional staff (non-academic, non-managerial), and professional leaders (non-academic, managerial) (Whitchurch, 2006; 2008; Whitchurch & Gordon, 2009). The author realises that some positions may overlap and may not have clearly bounded responsibilities in higher education settings.

8. Conclusion

The pilot study conducted prior to the broader research is important because it sheds light on the state of female leadership in Kazakhstan. An analysis of the PIAAC data has shown that not gender but particular literacy, numeracy, and ICT skills affect leadership. According to the analysis, women use the skills needed for leadership positions more than men. However, it does not reflect in the leadership statistics of the country, especially in the sector of higher education, where women outnumber men (Agency for Strategic Planning and Reforms of the Republic of Kazakhstan Bureau of National Statistics, 2019).

The results of this pilot study provided an opportunity for exploring the leadership aspect of higher education in Kazakhstan - why are there many women with advanced educational degrees but a lack of female leaders in higher education?

The author followed the pilot study with a broader research in the form of a doctoral dissertation. The doctoral dissertation aims to understand the micro-, meso-, and macro-level factors that affect women's choices about leadership in higher education and is anticipated to be finished in 2023. A preliminary literature review has distinguished micro-level factors as personal attitude, proactivity, and identity towards leadership; personal meso-level factors as work-life balance and support; institutional meso-level factors as organisational culture and mentorship; and macro-level factors as culture and conventions.

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The Echoes of Our Favourite Childhood Figures: Examining the Role of Disney in Lifelong Character Development Through Its Generational Fairy Tales

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Abstract

Since its founding, Disney has become the symbol of values such as joy, magic, entertainment, and family in our lives through loveable stories, characters, and unique experiences. Disney also has had a significant impact on youth culture with its ability to appeal to universal human experiences through its versatile character portfolio. Disney's recent tendency to reproduce their earlier success in modern adaptations (e.g., The Little Mermaid and Snow White coming in 2023) is the focus of this paper. It aims to examine the influence of Disney's representation of the mechanisms of our world on youth character development by comparing the responses given for the 'classic' and the 'modern' versions. For this reason, in addition to explicit measures (survey), an Implicit Associations Test (IAT) was used to discover those attitudes which would generally be hidden from explicit methods of analysis due to their subversive nature (e.g., deep affective content like nostalgia). The analysis revealed a significant correlation between IAT-measured implicit attitudes and explicit measures of attitudes and behaviour toward modern and classic (our target) categories. The results also indicate the significance of these scenes (especially the childhood 'classic' ones) as they can form strong bonds with the young audience, affecting their preferences, values, worldview, and, thus, their character development.

***Keywords*:** Character development, childhood memories, Disney, Implicit Association Test (IAT), neuromarketing

1. Introduction: Why Early Character Education Matters

In recent years, character development, and its vital part in our education, have served as a base for many discussions and research (Bialik et al., 2015; Department for Education, 2019; Naval et al., 2015; Pattaro, 2016; Purba et al., 2020; University of Birmingham, 2020). Despite all the interest, taking the first steps within the field of character education can be challenging as it lacks a definition on which there is a consensus (Pattaro, 2016). The definition of character education varies according to the particular viewpoint from which scholars connect to their research topic (Crossan et al., 2016). Jeynes (2019) adopts the definition of Lickona (1991), whereby "*character education is the deliberate effort to develop the virtues that enable us to lead fulfilling lives and build a better world*" (p. 228). Lickona's (1991) definition is one of contemporary society's most widely acknowledged interpretations of character education (Pattaro, 2016). It also underpins the definition offered by Berkowitz and Hoope (2009), who describe character education as "*the deliberate attempt to promote the development of virtue, moral values, and moral agency in youth*" (p. 132), where educational settings have a central function. Character, as a concept, is pictured as the fluid, intangible part of our nature, which is consciously and subconsciously formed by repetitive behaviours. Although character traits can be inherited to some extent, other parts of the character, like virtues, values, and several other traits, are learned and developed at early life stages and then (re)shaped by the impact of family members, friends, school, work, and social experiences, and other critical life events (Crossan et al., 2016).

Character development is a complex, lifelong journey. In this regard, the lack of experience, which solidifies the value of maintaining certain character traits, makes youth more vulnerable due to susceptibility to outer influence while exploring new ideas and novel challenges - for which they might not yet be ready (Berk, 2008; Naval et al., 2015; Simon et al., 1972). As we can read in the opening line of one of the most cited articles in this area by Berkowitz and Bier (2005, p. 64), "*For a society to endure, it must socialize each generation of youth to embody the virtues and characteristics that are essential to that society's survival and prosperity*". This reflects how children's capability to function as responsible citizens must be nurtured early on. Children who have sufficiently developed their character are most likely to overcome problems or obstacles in their lives. The right character education can be a vital tool in retaining hope and supporting an ideal way of survival for a generation who has to grow up - desirably into well-rounded, noble human citizens. This challenge is exacerbated by global crises such as the COVID-19 pandemic and the Russian invasion of Ukraine (González-Pérez & Ramírez-Montoya, 2022). Therefore, the importance of mastering character traits such as integrity, resilience, perseverance, optimism, a growth mindset, and (emotional) self-control, among others, increasingly comes under the spotlight (Crossan et al., 2016; Jeynes, 2019; Pattaro, 2016).

Despite the ongoing argument over whether we are born with, or inherit, a relatively fixed character set or that circumstances develop it with time, it is an established fact that early childhood development during the 'golden years' has a fundamental effect on a child's developmental trajectory (Crossan et al., 2016; Jeynes, 2019; Paul et al., 2020; Saptatiningsih & Permana, 2019). As Gunawan (2017) pinpointed, early childhood (between 2-7 years of age) is usually the time when we start to learn about the means of living and socialising. This stands as both a sensitive yet critical period since it will significantly determine the individual's attitudes, values, and behavioural patterns in later stages of life. Throughout this decisive period, the hidden potential may be actualised in case the proper stimulus is received. Hence, we cannot overstress the importance of age-appropriate character education. The positive and

negative experiences arising from initial encounters with the external world tend to burn into our memory, significantly affecting our psychological-social development.

Referring back to Crossan et al. (2016), the foundation of our character is formed through repeated early childhood experiences, knowingly or unknowingly. Our judgement on the value of a characteristic is acquired through intentional reward/punishment by an adult or through direct experience with the effects of our actions in the real world through a learn-by-doing process. To illustrate this idea, imagine a baby that keeps repeating and getting used to an activity (either good or bad) because every time it is done, laughter, smiles, or applause welcome it. The young brain does not excel in making value judgements and instead works like a sponge, absorbing all received stimuli while trying to find consistency in the effects of their actions. In seeking consistency, children consolidate their experiences with reality and generate a contextual anchor for their actions in the maze of novel information (Helterbran, 2009; Leming, 2000; Standish et al., 2006). Early theorists have argued that humans are social beings, and the dependency, and thus attachment to these so-called anchors (e.g., between infants and their mothers) broadly defines these early development stages. The early bonds with these significant objects, either taking the form of a person or an item (representing a person or a part of the person) and the positive and negative experiences involving them will serve as a basis for critical life lessons (Freud in Strachey, 1994; Klein, 1949; 1950).

However much the young brain is a miraculous 'engine', the threat is looming in every corner since playing with devices with internet access in early childhood has become natural in the daily lives of modern society (Ling et al., 2021). As a result, children (and even parents) likely have little or no control over the youth's exposure to harmful images in day-to-day interactions with the new parts of the world (Kargın, 2018; Utami et al., 2020). Widespread media and technology have provided excellent access to a vast range of information (Indriati et al., 2021), let it be via television, computer, tablet, or smartphone. Nevertheless, it has simultaneously exposed children to more adult-oriented, harmful content beyond its benefits. As a result, children constantly receive mixed media messages about good and bad character values and suffer from the loss of reduced opportunities for early social interactions, hence community experiences (Imroatun et al., 2021; Jolls, 2008; Keumala et al., 2018). Consequently, nowadays, when a young brain is subject to television programs – whether news or cartoons – such media content has a massive impact on our worldview, influencing our judgement of the world and even ourselves. Resultantly, huge multimedia companies like Disney represent not only an entertainment source but also a force that shapes the identities, desires, and subjectivities of millions of fans around the globe (Brode, 2004; Bryman, 1999; Forgacs, 1992; Giroux & Pollock, 2010; Wasko, 2020).

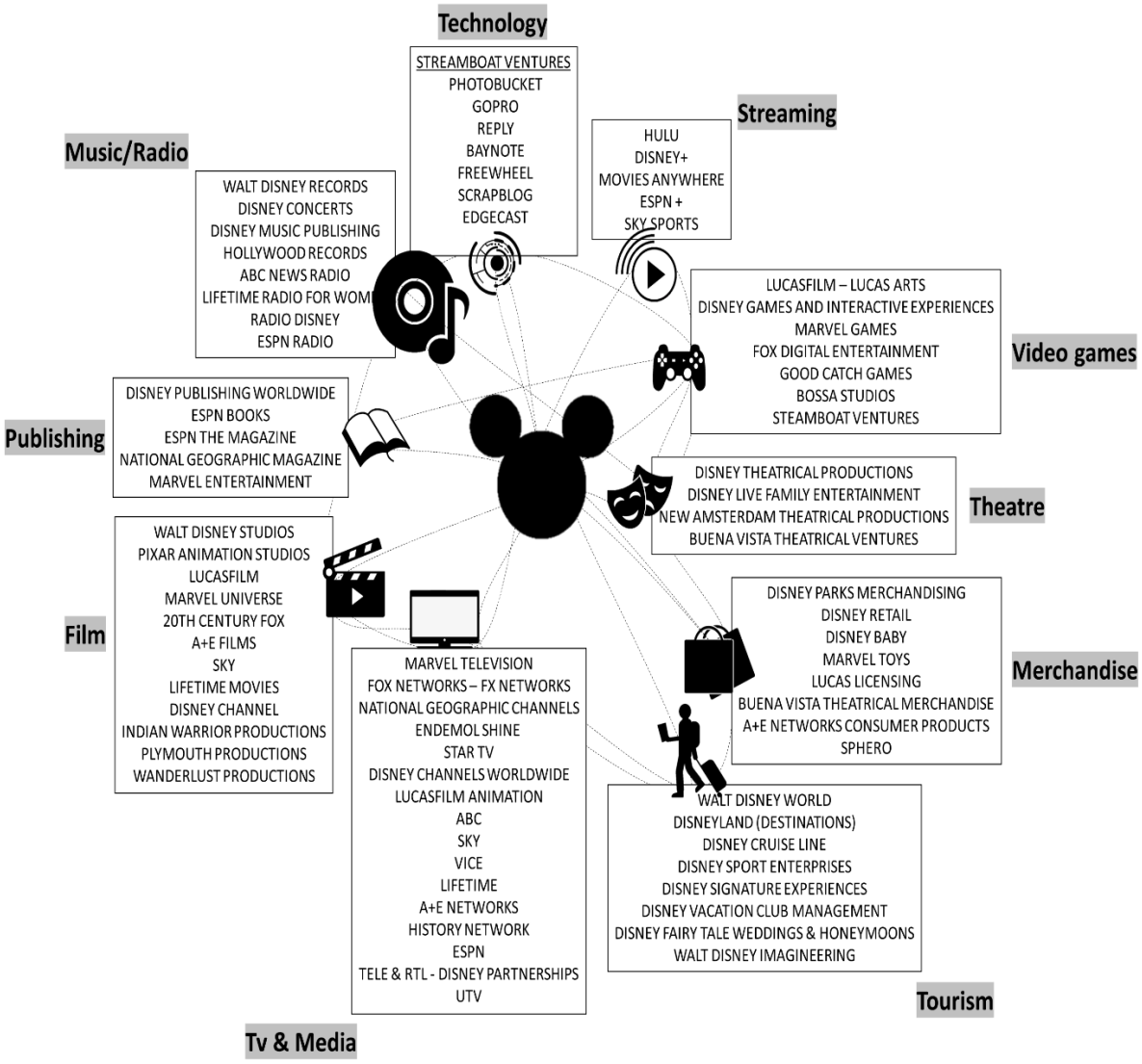
As literature is scant in this field, with our research, we intend to contribute to this debate by investigating the influence of the representation of our world in Disney scenes by using the combination of implicit associations between classic and modern Disney adaptations (IAT) and explicit (self-reported) survey-based answers related to general (Disney) preferences. The aim is to discover whether these early impressions define our later life values and choices, thus our character, proving that the power of the messages of children-targeted products has an influential factor in character development.

Our study follows the upcoming path: 2. Literature review: analysing the secondary sources relating to Disney's nostalgic content and the way this ever-growing brand influences our social practices, 3. Methodology: explicit and implicit measurements, 4. Results, 5. Discussion, and 6. Conclusion, limitations, and future research.

2. Literature Review: Disney and 'The Multiverse of Madness'

The Disney brand stands for pleasure and entertainment across the globe. Figure 1 provides an overview of the several high-profile brands Disney has (majority or minority) ownership of today, slowly becoming one of, if not the most influential brands globally. Cartoons, films, comics, books, toys, and theme parks, among other Disney products, have become critical actors in the entertainment industry, thus, forming an integral part of our everyday lives (Giroux & Pollock, 2010; Wasko, 2020).

FIGURE 1. THE DISNEY ENTERTAINING MULTIVERSE



Source: Author's own compilation, based on thewaltdisneycompany.com, 2022

As illustrated in Figure 1, the Disney empire is built up of nearly countless entertaining universes, capable of functioning independently, creating a Disney multiverse where everyone can find something to their taste. On top of that, the current approach of Disney (2014- "The Disney Renaissance of Live Action Remakes" – listed in Table 1) was destined to strengthen even stronger bonds with the fans by promising a nostalgic tour with the beloved and long-missed figures of our childhood.

2.1. Nostalgia and the Renaissance of Disney Live-Action Remakes

The nostalgia market is currently flourishing as all companies are looking for ideas to (re)create lucrative new touchpoints for consumers. Since most markets are saturated, brands often turn to the past for inspiration. For instance, Disney live-action remakes and merchandising of the childhood favourites of Generations X-Z were designed to lead to an emotional, nostalgic journey to the past, giving people exactly the kind of reminiscent experience for which they longed.

TABLE 1. THE DISNEY RENAISSANCE OF LIVE-ACTION REMAKES

Remakes (Modern Films)	Classics (Original Cartoons)
Maleficent (2014)	Sleeping Beauty (1959)
Cinderella (2015)	Cinderella (1950)
The Jungle Book (2016)	The Jungle Book (1967)
Alice Through the Looking Glass (2016)	Alice in Wonderland (1951)
Beauty and the Beast (2017)	Beauty and the Beast (1991)
Christopher Robin (2018)	Winnie the Pooh films
Dumbo (2019)	Dumbo (1941)
Aladdin (2019)	Aladdin (1992)
The Lion King (2019)	The Lion King (1994)
Maleficent: Mistress of Evil (2019)	Sleeping Beauty (1959)
Lady and the Tramp (2019)	Lady and the Tramp (1955)
Mulan (2020)	Mulan (1998)
Cruella (2021)	One Hundred and One Dalmatians (1961)
Pinocchio (2022)	Pinocchio (1940)
Peter Pan & Wendy (2022)	Peter Pan (1953)
The Little Mermaid (2023)	The Little Mermaid (1989)

Source: Author's own compilation, based on disneyplus.com, 2022

Regarding the above-mentioned nostalgia phenomenon, Holbrook and Schindler (1991, p. 330) defined it as

> *a preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood, or even before birth).*

In our study, we refer to personal or real nostalgia as a direct experience with the given component of nostalgia, which has different, unique meanings to everyone (Havlena & Holak, 1996). Positively, it could stand as a pleasant memory of the past, or it could induce the sense

of loss of previous experiences during the realisation that we are unable to recreate those moments (Holak & Havlena, 1998).

As Table 2 indicates, in most industries, we are witnessing the headway of nostalgic marketing approaches in the form of different advertisements and products. They work like a time machine by resurrecting older ideas (known as rebranding, retro, or vintage) to appeal to audiences eager to get 'one more taste' of the 'pleasant past'. It is no longer about the product (or service) to be shown or bought but instead about the emotional components like memories, feelings, and fantasies these unique objects stir within each individual (Chou & Lien, 2014; Havlena & Holak, 1991; Holbrook & Schindler, 1991; Stern, 1992).

TABLE 2. EXAMPLES OF RECENT NOSTALGIC BRAND APPROACHES

Brand	**Example(s)**	**Year(s)** (original) return
Niantic Labs	Pokemon Go	(1997-) 2016
Adidas	The timeless Gazelle	(1960s) 2016
Coca-Cola	Christmas / Santa (and the iconic bottles)	(1930s) 2014-
H&M	Friends themed collection	(1994-2004) 2020
Calvin Klein	The Re-Issue Project #mycalvins	(1990s) 2014
Budweiser	Rewind	(1980-2010) 2020
Netflix	Stranger Things and trends from the 1980s	(1980s) 2016-
Meta	Facebook Memories, Instagram #tb(t)	(individual) day-to-day
McDonald's	Throwback Deals	(1990s) 2021
Nintendo	Nintendo Entertainment System (NES) Classic Mini Plus, top classic games	(1983-) 2016
Nokia	The release of the Nokia 3310	(2000s) 2017
Walmart	Famous Visitors campaign	(1980-) 2020

Source: Author's own compilation

Additionally, according to Van Tilburg et al. (2015), this kind of nostalgia fosters creativity through openness to experience, whereas nostalgia harnesses the past for engaging with the

present and future. Moreover, Wildschut et al. (2018) noted that nostalgia might stand as a social cohesion tool as it is possible to transfer one's experience interpersonally and intergenerationally, creating a common bridge between different social groups, which fits the profile of Disney perfectly.

2.2. The Disneyization of Society and The Disney Babies

As Bryman (1999) noted in his article "*The Disneyization of Society*", brands such as McDonald's or Disney are powerful enough to transform the (consumer) world to their desired image by carefully planting their principles into more and more sectors of society. Large multinational companies - like Disney in our case - inevitably influence our everyday lives. Nowadays, popular fiction, especially Disney, stands as a vital machine in creating, reflecting, and reinforcing social values and norms as fictionalised and dramatised portrayals regularly displayed on the screen can easily form the base of our perceptions. In addition, nearly all forms of media have the power to write – rewrite (and deliver) different cultural messages (Greeley, 2018). Correspondingly, Disney being one of the primary sources of ideological and cultural knowledge, could result in a malformed, misshapen worldview, especially among the young ones affected at a critical age. This was highlighted by Brode (2004, p. 10),

> *He [Disney] did, after all, reach us first (and, therefore, foremost), at that very point in our youthful development when either an individual or a generation is most receptive (and vulnerable) to such forces and ideas*.

During one's self-discovery, young people prove to be an easy target of the camouflaged messages and campaigns of profit-hungry companies which are "*shaping human meaning and behaviour and regulat(ing) our social practices at every turn*" (Giroux & Pollock, 2010, p. 1).

Based on the relevant academic literature, Disney can influence our development in many ways. In the last decades, researchers have examined Disney from many angles and identified the following problematic areas: images of madness (Beveridge, 1996), mental illnesses (Lawson & Fouts, 2004), death (Cox et al., 2005), negative portrayal of older characters (Robinson et al., 2007), indirect aggression (Coyne & Whitehead, 2008), and child maltreatment (Hubka et al., 2009), which can be found in Disney's children movies. The first encounter with these scenes at a relatively early age can be influential, and even traumatic as the young brain may not be ready to process the events (e.g., the unforgettable death of King Mufasa in *The Lion King*). Disney was also a target of severe criticism after the discovery of the biased portrayal of (trans)gender roles, questioning whether young boys and girls will have suitable role models to look up to. Recently, several studies concluded that the underlying stereotypical issues might stimulate the construction of unreal beauty and behaviour images within the developing brain (Bazzini et al., 2010; Do Rozario, 2004; Hoerrner, 1996; Macaluso, 2018; Wohlwend, 2009). As previously discussed, these stereotypes are constructed by children through direct experiences or indirectly through some medium (Crossan et al., 2016; Gunawan, 2017), so these solid first impressions about death or how real princesses should look and act can form, change, and reinforce stereotypes.

One would think that Disney is exclusively for children since these fairy tales and the magical kingdom can most effectively reach those who have young and innocent minds who still believe in these kinds of fantasies. Although Disney's influencing strategy starts at a relatively early age with cartoons and toys (numerous parents reported that they ended up feeling guilty after not purchasing Disney products for their children, see Bohas, 2015), it does not end there at all. What is unique about the brand is that its magic works even through generations globally, as most of the characters and their stories become deeply rooted in people's minds. Disney accompanies many people throughout their most challenging years; the characters grow up

together with the adolescents, forming a deep, lifelong connection between the beloved brand and the fans throughout these years (Huang et al., 2022). The company also has a remarkable ability to pull the right strings to trigger nostalgic feelings within the older target segments, especially among those who are desperately looking for joy, positive feelings, and the comfort of the past, which is now available as their favourite childhood figures come to life (as illustrated in Table 1). As Forgacs described this phenomenon (1992, p. 361),

> *A Disney baby is also what you were if you were born at any date after 1925, were taken as a child to see Disney films, used to read Disney comics and owned some Disney merchandise such as a Mickey Mouse watch. Disney babies of the latter kind grow ideally into Disney adults. Disney adults take their children to Disney films and theme parks, buy them Disney merchandise and subscribe to the Disney Channel*.

Even after decades, the remakes mentioned above of the childhood classics are likely to lead to some kind of emotional resonance within the now-adults who will probably want to share those feelings with the new generations to teach them about something great from their own time proudly. Both generations are having a great time simultaneously: parents enjoy and recall those familiar, nostalgic moments while the kids experience a vicarious (transferred) nostalgia (Wildschut et al., 2018). With such nostalgic campaigns, Disney has ensured that after the first contact with the 'big world', it would be hard for many to forget this magical kingdom. We will be reminded of these childhood memories (and lessons) constantly, not only not to let the fire of Disney magic die out in the older generations but also to plant the seed of it in the newer ones as well; in most cases, the latter will be a shared effort between the brand and the 'Disney parents' (Forgacs, 1992).

Consequently, this potential bond formed early between the fans and the brand has a significant influence, working as a magnet attracting both young and old and making them sit down (together) for a movie. At any rate, as we can see, the impact of Disney - especially the one on our (character) development - goes far beyond 'just a movie'. Without such a project, our research focuses on this phenomenon by explicitly and implicitly shedding light on the possible impacts of childhood TV scenes on our career development - with Disney classics and remakes at the centre of attention.

3. Methodology

Forming an essential part of popular culture, films are interesting multimedia products. Beyond entertainment, watching a movie can provide us, amongst others, with inspiration, suggestions, and motivation, reflecting on our past and shaping our reality. Consequently, Disney's potential role in our character education is not a brand-new discovery. Previously researchers found several fundamental values and norms in the case of cartoons like '*Monsters University*' (Greeley, 2018), '*Finding Dory*' (Utami et al., 2020), and '*The Good Dinosaur*' (Indriati et al., 2021), which, through repetition, can be transferable to the target audience. However, it must be mentioned that these studies focused on a single Disney story using qualitative content or textual analysis methods. These articles gave us the idea to examine a sequence of Disney tales together - both classics and remakes - using explicit and implicit methods in parallel to get a clearer understanding of the topic:

Research Question One (RQ1): Do we find an (early) bond between Disney and the fans?

Research Question Two (RQ2): What are the characteristics of Disney fans?

Research Question Three (RQ3): Can any connection with Disney influence our everyday decisions, thus our character?

3.1. Research Design

The present study is based on a combination of explicit and implicit methods. The research started with a survey-based Implicit Association Test (IAT) (Greenwald et al., 1998), which was followed by an explicit self-reported questionnaire. The IAT was placed at the very beginning of the research so that the follow-up survey questions could not influence the attitudes reported during the implicit test (Griszbacher et al., 2022). The IAT consisted of 7 blocks (see Appendix 1), where before all the test blocks, practise blocks were introduced to let the respondents learn the principles before taking the actual quiz (Carpenter et al., 2019). A questionnaire followed the implicit part with questions centred around the key themes identified in the literature review.

3.2. Implicit Measurements

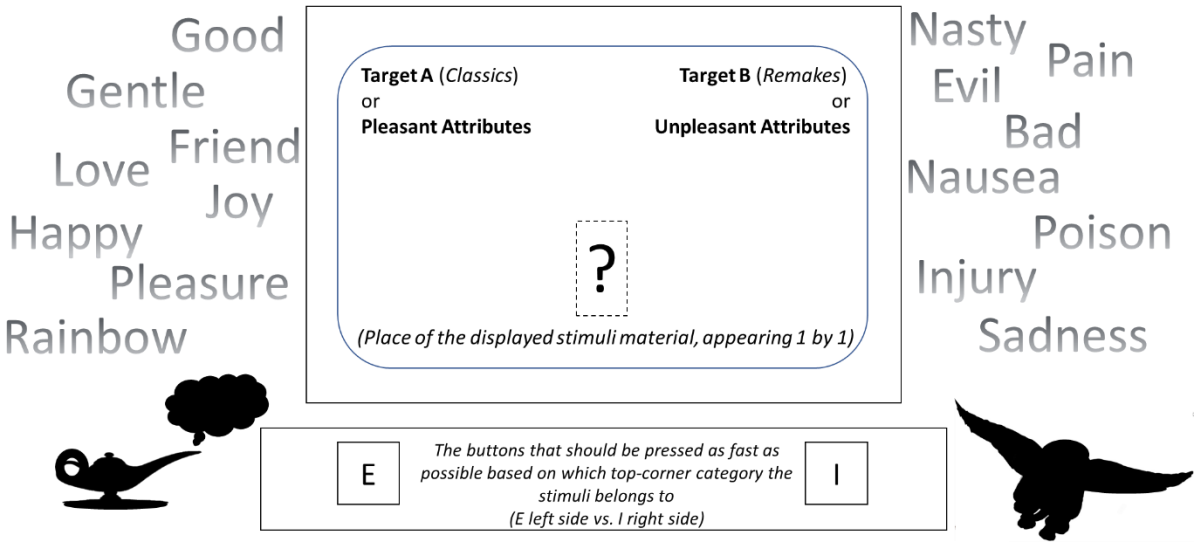
To avoid any distorting elements that may arise from the features of nostalgia in our exploratory research, a survey-based IAT was applied that is capable of revealing the relationship between a chosen target pair (e.g., insects vs flowers) and categories (like pleasant and unpleasant) by assessing the mental associations (Brendl et al., 2001; Brunel et al., 2004; Dasgupta & Greenwald, 2001). Although implicit measures may still be in their infancy, these are considered methods free of response bias since the respondents are unaware that they are reporting their attitudes towards the targets during the pairing task (Maison et al., 2004). Additionally, its good consistency, predictive power, and flexibility are often highlighted among the benefits (Bar-Anan & Nosek, 2014; Gregg et al., 2013). However, the IAT has recently received heavy criticism (Jost, 2019; Schimmack, 2021), among others, due to its seemingly low retest reliability (Bar-Anan & Nosek, 2014; Gawronski et al., 2017; Lai & Wilson, 2021). Nevertheless, the IAT is still one of the most popular implicit research tools with the ability to indirectly investigate psychological constructs by using automatic associations between evaluative dimensions and attitude objects (Greenwald et al., 2003). As Carlsson & Agerström (2016) noted, despite all the concerns about the test, the IAT provides an effective tool for investigating attitudes, preferences, and stereotypes. Epifania et al. (2021) also reported that the IAT has the potential to be used in an even broader and more varied range of research fields in the future. Regardless, for all this to be feasible and for the validity of the results obtained in neuromarketing research not to be questioned, several disciplines need to be coordinated, including the latest advances in neuroscience, psychology, and economics (Varga, 2016).

The respondents completed a survey-based IAT in Qualtrics, comparing classic and modern Disney adaptations stimuli set on the dimensions of pleasant and unpleasant (represented by Figure 2). To determine our error rate, we set the IAT to drop participants with the proportion of too short response times, namely 300ms (Greenwald et al., 2003). As for the stimulus materials of the IAT survey, images from 10 different Disney cartoons and modern film remakes were presented (see Table 1, the first ten pairs). The cartoons were classified as '*classic*', the remakes as '*modern*' and the following standard words belonged to each rating attribute (Maison et al., 2001):

a) Pleasant: friend, happy pleasure, gentle, good, joy, love, rainbow
b) Unpleasant: nasty, pain, evil, nausea, poison, bad, injury, sadness

Figure 2 helps to visualise the IAT process running in Qualtrics via a device with a keyboard:

FIGURE 2. THE IMPLICIT ASSOCIATION TEST IN QUALTRICS



Source: Author's own compilation, based on Maison & Maliszewski, 2016, p. 4.

The difference in the response rate between the evaluative dimension and the pairing with polar attitude objects indicates the extent of the implicit attitude power. So, suppose classic and pleasant are strongly connected. In that case, the respondent should respond faster if you must give the same answer (for example, by pressing "*E*" or "*I*" as Figure 2 also displays) on these two terms which position (left or right side - pressing the equivalent button) was randomly assigned (then reversed) at each case by the online Qualtrics platform (Carpenter et al., 2019).

3.3. Explicit Measures

Since neuro-based measurements are complementary to traditional methods (Lee et al., 2007; Plassmann et al., 2015; Ramsøy, 2015; Varga, 2016), the modern adaptation/unpleasant IAT was extended with an explicit survey to be able to compare implicit and explicit responses. In our case, the focus fell on the associations between the classic (vs modern) Disney adaptations and unpleasant (vs pleasant) categories. As an initial test of the survey-software IAT, an implicit preference was expected for classic adaptations over modern ones (targets) and correlations with explicit measures as well (Hofmann et al., 2005; Greenwald et al., 2009). Subjects completed a set of questionnaire measures of behaviour and attitude toward our target categories. The questionnaire contained the following questions:

a) Self-reported behaviour: frequency of watching movies (one question set about Disney-produced ones, one about movies in general, 5-point Likert scale),

b) Preferences: attitude towards the target categories (5-point Likert scale),

c) Demographic variable questions.

3.4. Data

Data collection was performed in the autumn academic term of 2019, conducted via Qualtrics online software to fulfil the requirements of our exploratory research (see earlier for the characteristics of the IAT). The test was shared in online Disney fan groups on different platforms and then re-shared by the fans among people with the same interests, using a so-called snowball sampling technique to identify and reach all those who had at least a slight connection to the brand previously. Our choice fell on this method because, in this way, it was more likely to reach a more significant proportion of our target segment within the given

timeframe with the lack of financial means (Baltar & Brunet, 2012; Biernacki & Waldorf, 1981; Heckathorn, 1997; Johnson, 2014). All research subjects participated voluntarily after all the key information was given regarding the aim of the research, features, length, voluntary participation, risks, confidentiality/anonymity, right to withdraw and e-mail contact in case of any questions or concerns on the cover page of the IAT. The test ended with a total of 130 responses, and 116 fulfilled the IAT criteria, providing a sufficient dataset for further analysis. After the data collection ended, all the records were anonymised (using code names such as 'participant1' and 'participant130') and stored in accordance with the Data Protection Act. The obtained information was available only to the researchers participating in the project (carefully following the points agreed on with the respondents at the start of the survey).

For data analysis, first, the built-in module of the iatgen.org platform was used to calculate the result of the IAT (sorting the data exported from Qualtrics.com). Then with the help of the IBM SPSS Statistics 26 software, the explicit and implicit results were compared to answer the research questions.

4. Results

4.1. Validity and Reliability

In our explicit measures, overall and specific attitudes towards both targets were measured with an 18-item scale; the questions were centred around nostalgia, quality, and identification in the dimensions of classic and modern Disney adaptations (see Table 3).

TABLE 3. EXPLICIT SCALE VALIDATION

	Modern	**Classic**
Cronbach alpha (α)	0.724	0.628
Mean	23.570	21.350
SD	5.718	4.225

Source: Author's own compilation

As depicted in Table 3, we found moderate reliability in the case of classic adaptations and good reliability in the case of modern adaptations (Hair et al., 2006; Peterson & Kim, 2013).

4.2. Demographic Profile

The descriptive statistics are summarised with the help of Table 4.

As in Table 4, the requirements of the IAT (Qualtrics) and the online data collection method broadly defined the sample, dominated by young, Budapest-based females with a university degree. It must be mentioned that this observation aligns with the previous ones made recently in Hungary using the implicit test in very different research areas, including manufacturer brands and private labels (Fuduric et al., 2022) and sports services marketing (Griszbacher et al., 2022). Nevertheless, our main aim to reach the 'Disney segment' (X-Z generations), the ones who potentially grew up on the classics and also watched the recent remakes, can be described as successful.

TABLE 4. SAMPLE DESCRIPTIVE

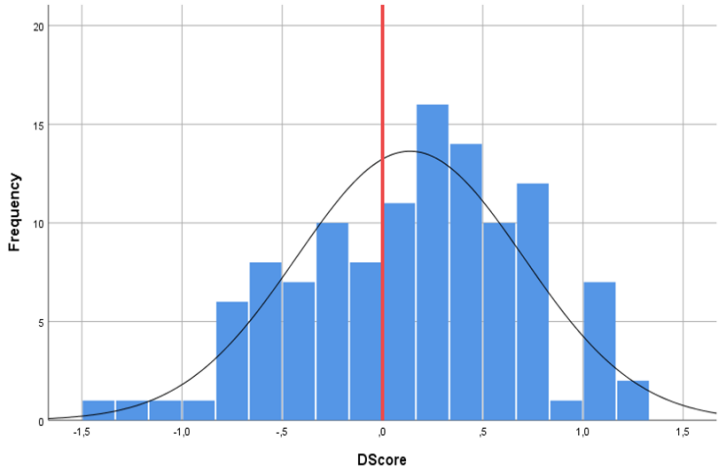
Dimension	Result
Number of respondents	130
Complete IATs	119
Valid IAT responses	116
Gender	87 (female), 29 (male)
Age	69 (17-24 years), 31 (25-34 years). 16 (35+ years)
Age (S.D.)	1.024
Highest education level	81 (university), 35 (no university degree)
Living place	78 (Budapest), 8 (big city), 30 (smaller city)
Family status	43 (single), 55 (relationship), 18 (married)

Source: Author's own compilation

4.3. Experiment Results

The implicit and explicit results were combined in our analysis (Greenwald et al., 2009; Hofmann et al., 2005). The dropped trial rates were low, and only 3 participants were excluded ($M_{timeout\ rate}$<0.00102, $M_{error\ rate}$=0.07097). The result of the IAT, namely the D-score, is the individual time response numbers, an aggregation of their response speed for the IAT questions. As shown in Figure 3, as a rule, the final score falls between -2 and +2 according to which category was easier (faster) to link with the positive dimensions (e.g., target category (Disney classics) + positive images = positive D-score) (Carpenter et al., 2019; Greenwald et al., 2003).

FIGURE 3. HISTOGRAM OF THE D-SCORES



N	116
D-score	0.12686
D-score SD	0.55325
t-test	2.46959
Error rate	0.07097
p-value	0.015
95% CI	0.02511 0.22861
Reliability*	0.911

(: Estimated internal consistency based on split-half with Spearman-Brown correction)*

Source: Author's own compilation

Our implicit result, the positive overall D-score (0.12686), shows that the scores are trending towards classic to pleasant dimensions (see the histogram above, where the data are the D-scores of the respondents and positive scores mean pleasant and negative mean unpleasant), which means it was easier (faster) to associate classic stimuli with the pleasant dimension. The positive tendency (IAT) indicates that there is a strong(er) link with childhood (classic) Disney scenes (RQ1).

Intending to reveal the characteristics of the Disney fans (RQ2), we grouped the D-scores into four categories: (1) '*anti-classics*' -2≤D-score<-1; (2) '*rather remakes*' -1≤D-score<0; (3) '*rather classics*' 0≤D-score≤+1; and (4) '*classics or nothing*' +1<D-score≤+2. A significant relationship was found between the respondents' age and the level of commitment to Disney (classics), meaning that the younger the participant, the closer they felt to the original stories, finding themselves in higher (more positive) D-score groups (Chi^2=28.805 Cramer's V=0.288, p<0.017). However, there was no other identifiable relationship between the respondents' demographic variables and the Disney (classics) fan groups.

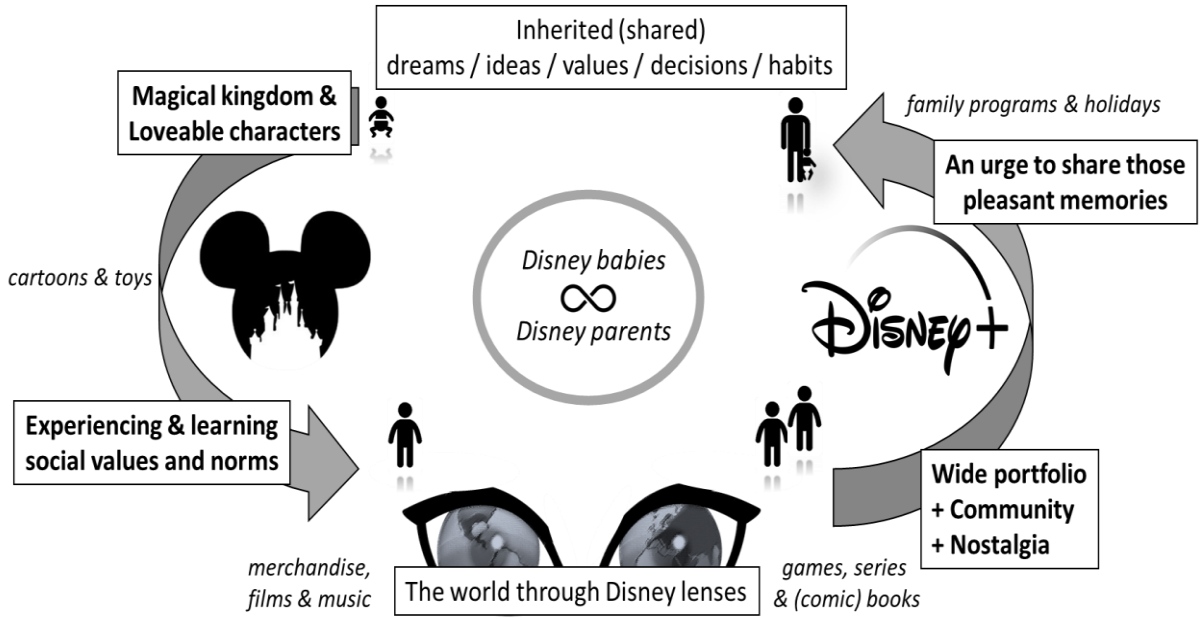
To see whether the level of Disney (classics) fandom impacts our preferences and attitudes, we cross-checked the IAT and the self-reported behaviour question scores (RQ3). Between the D-scores and the explicit measures of our study, we found the strongest correlation for the statements: "*The classic adaptations are better*" (Pearson's R=0.337, p<0.000), "*The modern adaptations offer the same experience as classics*" (Pearson's R=-0.342, p<0.000), "*The remakes are better because they tell my childhood experiences in the language of the 21st century*" (Pearson's R=-0.329, p<0.000), "*I prefer classic Disney to remakes*" (Pearson's R=0.197, p<0.034), and "*I enjoyed the remakes more than the original ones*" (Pearson's R=-0.190, p<0.041). As a result, explicitly and implicitly, the respondents in several categories (i.e., experience, language) expressed the feeling that the content of the original Disney universe was closer to them than the new ones.

5. Discussion

The present study shows that Disney has a special place for most of us, not only in our hearts but also in our brains affecting purchases and other everyday decisions. Even though both classic and modern targets were associated with affective content during the IAT, the classic target elicited significantly higher levels of enjoyment, confirming how powerful childhood encounters with Disney can be and the presence of a nostalgic bond that most fans still carry, even as adults. The identified strong link with these past motives is aligned with the findings of Brode (2004), in the sense that the brand's success mainly originated from its ability to find the children with its magical, happiness-promising kingdom at the most receptive but also susceptible times. This result also supports the idea of Forgacs (1992) about the different generations of 'Disney babies' as Disney not only reaches us as a child but also constantly gets back to us through various nostalgic messages, in a sense holding our hands throughout our lives.

Disney functions as the first gateway to the big world, experiencing and learning its wonders and threats through Disney's lenses, and later on, standing there as a good old friend and mentor who is always there if we need someone to turn to. Nostalgia seems to be a vital tool in this strategy as young adults, especially the ones living in troubling times, are often fond of reminiscing and looking back on what felt good and/or was popular in 'the good old days' as the literature review summarised (Havlena & Holak, 1991; 1996). In addition, in this way, the older generations can be used as a medium between the brand and the children, completing a 'never-ending cycle of Disney babies and parents', summarised in Figure 4. All this aligns with the conclusions of Bryman (1999), Giroux and Pollock (2010), and Wasko (2020) regarding the way big multinational companies like Disney, with carefully planned (marketing) strategies, are slowly taking control over increasingly larger slices of our lives, 'Disneyfying our society'.

FIGURE 4. THE NEVER-ENDING CYCLE OF DISNEY BABIES AND PARENTS



Source: Author's own compilation

Compared with the few research studies in this field (Greeley, 2018; Indriati et al., 2021; Utami et al., 2020), the novelty of our research is that we examined a series of Disney films (both classics and remakes) while using implicit and explicit methods combined. These explicit and implicit measures also shed light on Disney's educational potential (dreams, values, decisions, and consequences).

As our results confirmed, in today's booming entertainment industry, what we choose to do in our free time beyond fun has a decisive role in the light of every situation, presenting a different experience and opportunity to learn and deepen one's character (Crossan et al., 2016). Following Greeley (2018), Utami et al. (2020), Indriati et al. (2021), we proved that these tales could serve an important educational role, especially during the early 'golden years'. These early experiences and images from Disney might fade with time but will hardly be forgotten. Based on the literature from early childhood, the continuous encounter with the brand and its messages (due to the nostalgic content), these so-called 'repetitive lessons' from Disney, especially during our most formative years, will inevitably have a substantial impact on our character (Figure 4).

The recurring values seen at these early stages will likely serve as a foundation for morality, invoking desires, and structuring thought and action accordingly, potentially for a lifetime (Crossan et al., 2016; Gunawan, 2017; Jeynes, 2019; Paul et al., 2020; Saptatiningsih & Permana, 2019). Moreover, since the results of character education are usually not visible in a short time (Crossan et al., 2016; Lickona, 1991), these effects might not even be recognisable in one's childhood but come to life later, over the decades. Thus, if they are not recognised in time, they can cause an irreversible shift in a given direction in one's development. Nowadays, the content shown on television serves a critical socialising function. Therefore, Disney has a significant role in youth culture with its universal language and versatile character portfolio. Based on the research, it is suggested that we have to be careful with the available, unlimited Disney content as some weighty memories burned into our minds as a child might contain negative values and disturbing images as well (Bazzini et al., 2010; Beveridge, 1996; Coyne & Whitehead, 2008; Cox et al., 2005; Do Rozario, 2004; Hoerrner, 1996; Hubka et al., 2009; Lawson & Fouts, 2004; Macaluso, 2018; Robinson et al., 2007; Wohlwend, 2009).

6. Conclusions, Limitations, and Future Research

This study made some important findings. In understanding with Hofmann et al. (2005) and Greenwald et al. (2009), the findings of our exploratory study confirm the validity of the joint application of implicit and explicit measures. However, follow-up studies are required to understand how childhood experiences (i.e., Disney cartoons) exactly affect our character development and the effectiveness of neuromarketing applications.

There are also some limitations to this study that can guide future researchers. Firstly, although the IAT has several benefits, it is a time-consuming test that requires a high degree of concentration that usually hinders reaching a more significant number of participants. Although our sample size seems relatively low, based on the most cited IAT research (Brunel et al., 2004; Dasgupta & Greenwald, 2001; Greenwald et al., 1998; Maison et al., 2004), it can be concluded that in the case of this kind of research the average sample size often falls around 80 (Greenwald et al., 2009). Secondly, the test has certain technological restrictions (e.g., pressing given buttons). Thus, a device with a keyboard is needed and currently only applicable via Qualtrics.com, setting an online data collection method that primarily determines the demographics (Fuduric et al., 2022; Griszbacher et al., 2022). In future research, a larger sample size (with more nations involved) could be used to validate the measures. Thirdly, following our research focus with the IAT, we could only compare the link to classics and remakes along a pleasant-unpleasant axis.

It remains for future research to explore whether, among others, the good or the bad values are acquired easier, in what percentage they are present in the classics and the remakes, and what age group is the most endangered in this sense. Together with the present findings, future research can enrich our understanding of the complex topic of character development and its implications for quality of life and psychological well-being, and in our case, we must not forget its commercial applications either.

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Appendix

A. Implicit Association Test (IAT)

7 blocks (set of trials).

D-score calculated via the results of Block 3 + 4 + 6 + 7 (see Carpenter et al., 2019).

1. *Initial target-concept discrimination* (20 trials)
2. *Associated attribute discrimination* (20 trials)
3. *Initial combined task* (20 trials)
4. *Repeated combined task* (40 trials)
5. *Reversed target-concept discrimination* (40 trials)
6. *Reversed combined task* (20 trials)
7. *Repeated reversed combined task* (40 trials)

B. Reported Behaviour and Preferences

Measured on a 5-point Likert Scale.

1. To what extent do you consider yourself a Disney fan?
2. I watched a lot of Disney cartoons when I was a child
3. Today I enjoy watching Disney cartoons especially for nostalgic reasons
4. I was excited when I heard about the new remakes
5. I enjoyed the remakes even more than the original ones
6. The original stories are better
7. I prefer classic Disney to remakes
8. It is important for the younger generations to have the chance to also experience the original Disney world and magic offered by the classics
9. The classics (cartoons) are for children primarily
10. For children it is easier to understand and identify with the message of the original Disney movies (cartoons)
11. Children feel themselves closer to the characters of the original movies (cartoons)
12. The new remakes will be able to replace the original ones at one day on the way of becoming truly timeless
13. The modern adaptations offer the same experience as classics
14. Watching remakes give me much more satisfaction
15. Thanks to the modern approaches it is easier to understand the plot and the motivation of the characters (evil vs. good)
16. I don't consider the adaptations to be authentic as they (re-)present the main characters differently
17. The remakes are better because they tell my childhood experiences in the language of the 21st century
18. The target audiences for the remakes are mainly the older generations
19. Remakes are better for children as they tend to showcase modern values, actions and places

C. Demographic Data

1. Gender
2. Age
3. Highest education level
4. Living place
5. Family status

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Preparing for a Sustainable Career: Challenges and Opportunities

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1. Introduction

A sustainable career can be understood as a dynamic and flexible process that plays out over time whereby, via career agency, an individual commits to lifelong learning and the generation of personal resources across a series of career experiences that provide meaning to the individual (Van der Heijden & De Vos, 2015). Therefore, the three dimensions of a sustainable career are person, context, and time. Our paper examines the challenges and opportunities that university students face when preparing for a sustainable career since time spent in higher education can act as an antecedent to career sustainability. The content is based on our Closing Keynote Speech at the GiLE4Youth Conference on 2nd June 2022. Conference Website: https://www.gile-edu.org/trainers-and-participants-of-the-gile4youth-conference/

2. Challenges

Chance events such as the COVID-19 pandemic, the war in Ukraine, and climate change mean that individuals must embrace change and adapt to ensure their skill sets remain relevant for the needs of society in the future. The pandemic caused unprecedented disruption to the education of university students and significantly restricted their opportunities to acquire work experience. This means that current cohorts of students are some of the least prepared for entry into the labour market, and university career services are struggling to meet the increased demands for support (Donald et al., 2021). Some students lack knowledge of 'when to apply', 'how to apply', and 'where to apply'. Those who receive interviews must be capable of signalling their employability to potential employers (Anderson & Tomlinson, 2021). However, reduced opportunities for lifewide learning and a lack of understanding of the recruitment process mean some students receive many rejection decisions, leading to high stress levels and loss of confidence due to uncertainty for the future. These experiences can have a compound effect since three-quarters of university students, and recent graduates report reduced subjective well-being since the pandemic began (Donald & Jackson, 2022).

3. Opportunities

Donald et al. (2019) propose that the self-perceived employability of students increases when they develop human capital, seek career advice, and proactively take ownership of their careers. Moreover, Mouratidou and Grabarski (2021) found that during the pandemic, individuals who felt in control of their careers experienced enhanced sustainable career outcomes of health, happiness, and productivity. Therefore, students can benefit from adopting a growth mindset and committing to lifelong and lifewide learning during university and their lifespan (Cole & Coulson, 2022). This may involve participation in clubs, societies, charity work or paid work to develop resources and build personal networks. Additionally, students need to seek career guidance early during their degree studies, and university career services must partner with industry to share resources and foster win-win outcomes (Buckholtz & Donald, 2022). Finally, the ability to signal one's employability is crucial for success (Anderson & Tomlinson, 2021).

4. Conclusion

We believe students will need increased support from university career services and industry. Such support can enhance understanding of what is required and enable students to acquire the necessary resources during their university studies to navigate the transition into the industry and establish the foundations for a sustainable career across the lifespan.

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Open Science as a Key Enabler of Development:
Opportunity for Young Researchers and Widening Countries

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Abstract

The new European Research Area (ERA) policy paper with the Horizon Europe programme will change the continent's Research and Innovation (R&I) ecosystems. With the support of several member states, decision-makers in European Institutions see Open Science as the key to a globally competitive European R&I system. Its success, however, also requires dedication from the national and local levels and a change in how researchers work. Interdisciplinary, collaborative approaches are becoming crucial in the new era of European research, while enhanced support and emphasis on connecting R&I leading and lagging countries can release new synergies. This article briefly introduces new tools and opportunities to help policymakers and young researchers increase their positive impact.

Keywords: European Commission (EC), European Open Science Cloud (EOSC), European Research Area (ERA), European Union (EU), Policy, Research and Innovation.

1. Introduction

In a rapidly changing world, during these times of global crises, where countries are facing fundamental problems of shortages of goods, labour, and energy resources, whilst also challenged by the side effects of climate change, global approaches are needed to counter global problems. International strategies include cutting-edge solutions that require interdisciplinary research with a collaborative, stakeholder approach. Research and Technology Organisations (RTOs), academics and researchers should not work in silos anymore but in joint efforts with the industry, policymakers and non-governmental organisations. This was the principal idea behind the new European Research Area policy paper (European Commission, 2020) by the European Commission (EC). It aims to collect all previous Horizon 2020 achievements and build upon them to extend them with a massive investment programme of 95.5 billion EUR through Horizon Europe (EC, 2022a). Its objective is to create a coherent, single area for

researchers while respecting the autonomy of the member states. European policies and initiatives only function as continental catalysts if favourable national and local contexts exist that support local researchers and the industry, including small and medium enterprises (SMEs). If they exist, they can be channelled into continental and global progressions and developments through EU initiatives.

2. Opportunities of Open Science in the EU Context

The uptake of the concept of Open Science (OS) by the EC can also be used as another critical enabler in the hands of local policymakers to connect their Research and Technology Organisations (RTOs) and industries (or their Research and Innovation (R&I) ecosystems) to European and global leading research projects and infrastructures (Ince & Janger, 2022). This, however, requires significant local investment and dedication from all stakeholders.

The objectives of OS are multidimensional and have different levels. It provides a horizontal, interlinked approach to policymakers on EU, regional, national and local levels to use the strengths of the diverse but also divided landscape of the EU and to minimise weaknesses that hinder the competitiveness of European R&I. With pan-European initiatives, structures and policies, better and smarter coordination of national policies can be ensured, based on evidence. From the side of national and local policymakers, more efficient specialisation strategies can be drawn and implemented that save significant amounts of effort (financial, labour, time). Smart specialisation strategy (S3, RIS3) already provides a tool and platform for national and local decision-makers to map their potential in the European context. These are also used to create common R&I indicators for EU countries, like the European Innovation Scoreboard (EIS), Regional Innovation Scoreboard (RIS), Science, Research and Innovation Performance of the EU (SRIP) report, and the Transition Performance Index (TPI). If national policies enhance their countries' comparative advantages, then those countries can capitalise on their strengths and connect to international initiatives. For widening member states, this is challenging because of high barriers between R&I leading and lagging countries (EC, 2022b). That challenge was addressed via two components within the Horizon Europe programme, 'Widening Participation' and 'Spreading Excellence'. These components aim to "amplify geographical diversity, build the necessary capacity to allow successful participation in the R&I process and promote networking of and access to excellence" (EC, 2022c). Once national policymakers, funding agencies, RTOs and R&I decision-makers incentivise the participation of researchers in these projects, the uptake of Horizon projects in widening countries and mainstreaming of Open Science overall can gain momentum.

3. Potential Emergence of Young Researchers

In the case of the aforementioned favourable socio-economic circumstances that include supportive scientific uptake and policy frameworks (including incentives), even young researchers can have a global impact by using OS principles and tools. In such a strictly hierarchical setting as academia, where high burdens harden the entrance and recognition of fresh PhD students and graduates to the R&I market, it is crucial to provide means, like OS tools, with which they can connect to global dialogues despite the potentially disabling factors of related hierarchical orders. Another asset is that they can be the first "OS" native researchers that will be highly advantageous for the future labour market, which is also enhanced by the European Researchers' job portal, EURAXESS.

OS tools and infrastructures, like the European Open Science Cloud (EOSC), will enable researchers to work simultaneously, in a collaborative approach with others, in a multidisciplinary working environment (EOSC, 2022). This also means that required skills from researchers are going to change. This is now recognised by leading European and national policymakers and RTOs through consultations by the European Research Area Committee (ERAC), concluding with the Agreement on Reforming Research Assessment that aims to change the European Research landscape (Ince & Janger, 2022).

As a guide, within the frames of EOSC Future (EOSC Future, 2022), practice stories and case studies were collected that can help researchers' journeys into the world of Open Science.

4. Conclusion

R&I is a significant asset and tool to counter unprecedented times, but it needs comprehensive reform. Researchers can benefit from these changes by mastering basic skills such as collaboration, horizontal thinking, and digital knowledge. If decision-makers of all levels agree and co-create an adaptive environment, then Open Science can be an investment with great returns rather than costs.

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