DANCE-RELATED RESEARCH IN TERTIARY EDUCATION

A SYSTEMATIC LITERATURE REVIEW

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Abstract

The purpose of this article is to map the landscape of the most recent dance-related research in higher education. Research results from the last ten years, consisting of 69 reviewed articles in total, are overviewed in a systematic literature review based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol. The research presents the current state of multidisciplinary dance research in higher education regarding (1) the most frequently examined dance types in dance research, (2) the countries most typically represented in dance research in higher education contexts, (3) the tendencies in research design, (4) the types of research instruments employed, and (5) the most prominent research topics in dance research in the last ten years.

Keywords: dance, higher education, systematic literature review, research methods

1. INTRODUCTION

It is crucial to differentiate between the phenomenon of dance research, which incorporates movement analysis and choreographic research, and dance-related research, which is the examination of dance-related phenomena from the perspectives of diverse disciplines (Lanszki, 2020). In our study, we examine how dance-related phenomena have been studied in the higher education context over the last ten years across various disciplines, including medicine, psychology, pedagogy, ethnography, and cultural anthropology. The diversity of the research methods used in the above fields arises from the different investigative procedures that characterize these disciplines. Accordingly, both quantitative and qualitative methods and various research tools are used in dance-related research.
Research related to dance in general mostly consists of case studies and action research in which educators reflect on best practices in dance classes (Baran, 2020; Petsilas et al., 2019; Rimmer, 2017; Roe, 2017; Stevens et al., 2020); empirical studies following a quantitative research paradigm seem to be underrepresented. Such pieces of research include Motion Notation studies (Dilek & Muhsin, 2017) or studies on dancers’ health (DiPasquale et al., 2021).

Most of the dance-related research is targeted at K-12 students in formal or informal dance education. When identifying thematic clusters of the research directed at this target group, it can be seen that one of the clusters incorporates research on physical development (Bogáti et al., 2023; Ujvári & Szabó, 2023), mental health (Biasutti & Habe, 2021), and cognitive skills development (Bollimbala et al., 2019; Pálinkás-Molnár & Bernáth, 2020). Meanwhile, the research of the second cluster thematizes methodological programs and their impact assessment (Dilek & Muhsin, 2017; Lanszki et al., 2021; Papp-Danka & Oláh, 2021), while the third cluster examines the relationship between societal change and dance education (Horwitz et al., 2022; Zimányi & Lanszki, 2020).

At the outset of our research, based on the general trends in dance-related research, we hypothesized that there is a lack of empirical research in tertiary dance education, particularly in Europe. We also hypothesized that studies written in English by native English-speaking authors are overrepresented among the selected papers, as some authors have criticized “the cultural hegemony of the United States” (McCarthy-Brown, 2015, p. 30). We were also curious as to whether case studies and action research reflecting best practices in dance education are predominant and whether empirical studies employing quantitative research paradigms were underrepresented.

Based on our problem statements, our research questions were the following:

1. Is there a dance type that is disproportionally represented by empirical research?
2. Are there geographical patterns in dance-related research?
3. Which research design is more frequently utilized in dance-related research – quantitative or qualitative?
4. Are there any validated instruments for research in dance, or are measurement tools from other disciplines used in dance-related research, as well?
5. What are the main topics addressed by recent dance-related research?

Although there are examples from earlier years of dance research during which higher education has been the focus of research (Hagood, 2008), as previously mentioned, the research field has focused mainly on exploring dance-related phenomena in K-12 education. However, given that higher education is a context characterized by research activities, our study focuses on reviewing dance-related research at the tertiary level. The present study aims to map the current state of multidisciplinary dance-related research in higher education from over the last ten years.

2. METHODS

To answer our research questions, we chose the systematic literature review method, following the model described by Zawacki-Richter et al. (2019). For quality assurance reasons, we decided to follow a reliable systematic review protocol, namely PRISMA
(Preferred Reporting Items for Systematic Reviews and Meta-Analyses) in order to minimize bias and enhance the rigor of the review process (Page et al., 2021). The standardized PRISMA framework helped us to design and map the stages of the review process. To avoid bias during the selection and evaluation processes and to ensure the reliability of the research, we (1) established clear inclusion and exclusion criteria, (2) conducted a thorough and transparent search for relevant studies, and (3) involved three reviewers.

Our inclusion criteria were aligned with our research topic and aims. The keywords “dance”, “higher education”, and “research” were used in order to compile our sample. The sources were also selected based on the criteria that they were peer reviewed, written in English, published in the last ten years (2013–2023), and could be downloaded in full-text format. Only journal articles were included in the review, while we excluded other types of publications like conference abstracts or grey literature (Table 1).

<table>
<thead>
<tr>
<th>Research field</th>
<th>Studies designed to explore dance-related phenomena in higher education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of research</td>
<td>Peer-reviewed qualitative, quantitative, and mixed methods research</td>
</tr>
<tr>
<td>Population</td>
<td>Students in higher education</td>
</tr>
<tr>
<td>Date of publication</td>
<td>Studies published between January 2013 and January 2023</td>
</tr>
<tr>
<td>Language of publication</td>
<td>Studies written in English</td>
</tr>
<tr>
<td>Transparency</td>
<td>Studies which explicitly described the theory, methodology, and data on which conclusions rest</td>
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Table 1. Inclusion criteria

The inclusion criteria of the articles also outlined the exclusion criteria, which we established in order to refine our sample. Firstly, studies lacking available full-text formats and published without having been reviewed were excluded. Secondly, the population criterion was limited to students in higher education. As the review focused on exploring dance-related research in higher education, studies that were conducted in a K-12 education context had to be excluded. Moreover, studies published prior to January 2013 were excluded to in order to focus on more recent and up-to-date scholarship. Additionally, the language criterion excluded studies
that were not published in English to enhance accessibility and comprehensibility. Lastly, in order to ensure transparency, studies that did not present explicit descriptions of their theory, methodology, and results were also excluded. These exclusion criteria collectively helped to refine and focus the systematic review on high-quality, relevant, and transparent research within the specified scope of dance-related research in tertiary education.

Targeted sampling was employed in the review and relevant full-text journal articles were searched for using the EBSCO, ERIC, and DOAJ databases. A decision was made not to use JSTOR as it does not offer the option to filter out non-peer-reviewed studies; in addition, our search for articles containing the keywords “dance”, “higher education”, and “research” written in English between 2013-2023 resulted in 21206 scores, which was deemed unmanageable. Although Google Scholar and ResearchGate include a wide range of scholarly publications, it is not clear whether the journal articles provided are peer-reviewed or published in an indexed journal. Due to the lack of quality control and the limited advanced search options, these databases were excluded from the sampling and selecting process. Additional peer-reviewed journals related to dance research were also included.

All three researchers carried out the screening and selection activities independently to ensure that subjective preferences did not influence the selection of the studies. Throughout this process, the PRISMA protocol played a pivotal role in the search and selection of articles for the review. A total of 121 texts were identified through rigorous searching the chosen databases: this included 9 texts sourced from EBSCO, 71 from ERIC, and an additional 38 from DOAJ. Furthermore, we enriched our pool of sources by including 3 articles from other peer-reviewed dance-related journals, further enhancing the comprehensiveness of our review. This meticulous approach to identifying and selecting references allowed us to draw from a wide range of scholarly perspectives, strengthening the reliability and validity of our research findings.

Prior to the screening process, certain texts were carefully filtered out. First and foremost, five duplicate texts were removed to eliminate redundancy and streamline the dataset. Additionally, 13 sources were marked as ineligible based on the predetermined criteria, thus ensuring that only relevant and suitable references would be included in our analysis. This rigorous curation process helped refine our pool of references, ensuring that each record considered for inclusion in our research was unique and met the necessary eligibility criteria.

In EBSCO, 9 results were found based on our search criteria, and only three of them were relevant. ERIC provided 71 results, out of which 58 proved to be relevant (Figure 1).
The screening process was a pivotal step in refining the selection of studies. After meticulously removing duplicate sources and those marked as ineligible, we were left with 102 references. These references then underwent title and abstract screening, during which 25 were removed from the sample as they were found to be unrelated to dance or dance research, or the research was not conducted in an educational setting.

Following this initial screening, 78 full-text articles were assessed for eligibility. However, during the full-text assessment, nine additional references were excluded: Seven were removed as they focused on K-12 education, which was outside the scope of our research, while three references were excluded due to a lack of transparent methodology. This screening further ensuring the quality and rigor of the studies included in our analysis, producing a final selection of references that was both relevant and methodologically sound and reinforcing the reliability and validity of our research findings.

The remaining sources were selected by prioritizing the weight of the reported research findings. At the end of the selection process, the sample for our systematic review consisted of 69 research papers, which were analyzed and reported in a narrative synthesis in line with our research questions.
3. RESULTS

In total, 69 studies met the eligibility criteria and were included in the review. One study was published in a conference proceedings, and the rest appeared in peer-reviewed journals.

3.1 Dance Genres in the Focus of Dance-Related Research in Higher Education

In the field of dance-related research, numerous dance types have been extensively examined, representing a diverse range of cultural, historical, and artistic backgrounds. Although it is challenging to definitively determine if one dance type is universally better represented by empirical research, the systematic literature analysis allowed us to identify which dance genres have consistently garnered significant attention in dance-related research in higher education. We hypothesized that classical ballet would be a focal point of empirical investigation due to its long history, technical complexity, and potential for physiological and biomechanical analyses. However, this hypothesis was not confirmed, as contemporary dance was the most frequently examined dance genre in the 69 articles (Baran, 2020; DiPasquale & Roberts, 2022; Higdon, 2022; Dryburgh, 2020; Dryburgh & Jackson, 2016; Higdon & Stevens, 2017; Kearns, 2016; O’Leary et al., 2019; Papp-Danka & Lanszki, 2020; O’Leary et al., 2019; Pulinkala 2014; Rimmer, 2017; Ritchie & Brooker, 2018; Salcedo et al., 2017; Szászi & Szabó, 2021; Salcedo et al., 2017; Tsompanaki, 2014; Walker, 2019), with classical ballet being the third most researched area in the context of higher education from the last decade (Barton & Ryan, 2014; Duffy, 2018; Papp-Danka & Lanszki, 2020; Petsilas et al., 2019; Rimmer, 2017; Ritchie & Brooker, 2020; Salcedo et al., 2017; Szászi & Szabó, 2021; Salcedo et al., 2017; Walker, 2019) (Figure 2).

![Figure 2. The Most Frequently Examined Dance Types in Higher Education (n = 69)](image-url)
Traditional local and folk dances were the second most represented dance types in this research field (Altun & Atasoy, 2019; Assandri, 2019; Clendinning, 2022; Conner, 2021; Dilek, 2017; Jin & Martin, 2019; Kaktikar, 2020; Liu, 2020; Papp-Danka & Lanszki, 2020; Salcedo et al., 2017; Szászi & Szabó, 2021). Ballroom, Latin, and Latin-American dance-related research, however, were underrepresented in our sample, featuring in only six of the examined articles (Domene & Morley, 2021; Papp-Danka & Lanszki, 2020; Rimmer, 2017; Stevens et al., 2019; Szászi & Szabó, 2021; Yin & Liu, 2022). Other more marginal dance styles, such as musical theatre dance (Bonner, 2022; Szászi & Szabó, 2021) and hip-hop (Sulé, 2015; Yin & Liu, 2022) were examined in four papers. The underrepresentation of theatre, ballroom, street, and Latin dances in dance-related research in higher education can be attributed mainly to these dance forms being marginalized in higher educational programs and curricula. Many academic institutions and dance programs have traditionally only placed focus on contemporary and modern dance forms or classical ballet. These institutions may lack teachers with expertise in commercial, ballroom, and Latin dance, which can limit the availability of courses, leading to a lack in opportunities and the ability to gather samples for higher educational research.

In the remaining articles, dance types were not specified. In certain cases, decisions had to be made - based on the content of the article - regarding how to categorize some dance types, for example, when the author of a given research article simply referred to ‘ballet’ without the attribute ‘classical’. In such cases, the dance type was categorized as classical ballet. Similarly, ‘dance’ was categorized as contemporary dance. However, it must be noted that dance courses at some universities might incorporate several genres without specializing in one particular type (McCarthy-Brown, 2015).

3.2 Geographical Distribution of Dance-Related Research in Higher Education

Our second research question pertained to the geographical distribution of the chosen studies. All 69 articles found were categorized based on the geographical origins of the authors or the examined population. Based on the examination of the previously mentioned databases, it can be established that, within the time period examined, the articles found did not show a great deal of geographic variety.

Our findings show that over 70% of the sample of research articles originated from English-speaking countries with, over 60% (n = 26) from the United States (Baran, 2020; Bonner, 2022; Brown, 2022; Clendinning, 2022; Conner et al. 2021; DiPasquale et al., 2021; DiPasquale & Roberts, 2022; Risner & Musil, 2017; Dragon, 2015; Duffy, 2015, 2019, 2020; Gail et al, 2018; Haines & Torres, 2016; Johnson, 2018; Kearns, 2016; Lopez, 2019; McCarthy-Brown, 2015; Patton et al, 2022; Pulinkala, 2014; Purvis, 2018; Risner & Barr, 2015; Robinson, 2016; Sulé, 2015; Walker, 2019) and the United Kingdom (n = 17) (Assandri, 2019; Domene & Morley, 2022; Dryburgh, 2020; Dryburgh & Jackson, 2016; Ehrenberg, 2020; Farrer, 2018; Higdon & Stevens, 2017; Johnson et al., 2019; Kelsey & Uytterhoeven, 2016; Mills, 2014; O’Leary et al., 2019; Petsilas et al, 2019; Rimmer, 2017; Ritchie & Brooker, 2018, 2019; Roe, 2017; Seago, 2020), whereas only 10.14% was from Australia (Barton & Ryan, 2014; Dunbar-Hall et al., 2015; Steves et al., 2020; Stevens & Huddy, 2016) and New-Zealand (Longley & Kensington-Miller, 2020; ‘Ofamo’oni, 2021; Wang, 2022) (Figure 3).
A further 10.14% of the articles originated from Asian countries such as China (Yin & Liu, 2022; Jin & Martin, 2019; Liu, 2020), India (Kaktikar, 2016, 2020), Taiwan (Hsia et al., 2022), and Malaysia (Pangayan, 2021). Including Turkey, which was classified as a European country due to the ongoing negotiations regarding its accession to the European Union, 12 articles were categorized as European (Altun & Atasoy, 2019; Bebetsos & Goulimaris, 2014; Cuellar-Moreno & Caballero-Juliá, 2019; ElyaÄŸutu & Hazar, 2017; Gaunt & Treacy, 2020; Leijen & Sööt, 2016; Papp-Danka & Lanszki, 2020; Salcedo et al., 2017; Schmidt, 2020; Szászi & Szabó, 2021; Tembrioti & Tsangaridou, 2013; Tsompanaki, 2014). It was also observed that some authors were involved in more than one research project in the period examined (DiPasquale et al., 2021; DiPasquale & Roberts, 2022; Duffy, 2015, 2019, 2022; Dryburgh, 2020; Dryburgh & Jackson, 2016; Ritchie & Brooker, 2018, 2020; Yin & Lin, 2022; Jin & Martin, 2019; Kaktikar, 2016, 2020).

3.3 Research Methodology of Dance-Related Research in Higher Education

Our third research question referred to the research methodologies employed in the studies in question. Nearly two-thirds (62.32%) of the research (n = 43) used qualitative methods (Assandri, 2019; Baran, 2020; Barton & Ryan, 2014; Bonner, 2022; Conner et al., 2021; Domene & Morley, 2022; Duffy, 2019, 2020; Dryburgh, 2020; Dryburgh & Jackson, 2016; Ehrenberg, 2020; Farrer, 2018; Haines & Torres,
2016; Higdon & Stevens, 2017; Johnson, 2018; Johnson et al, 2019; Kaktikar, 2016; Kattner, 2016; Kelsey & Uytterhoeven, 2016; Leijen & Sööt, 2016; Liu, 2020; Lopez, 2019; McCarthy-Brown, 2015; Mitchell, et al., 2018; ‘Ofamo’oni, 2021; O’Leary et al., 2019; Patton et al., 2022; Petsilas et al., 2019; Pulinkala, 2014; Rimmer, 2017; Risner & Barr, 2015; Ritchie & Brooker, 2018, 2019; Robinson, 2016; Roe, 2017; Salcedo et al., 2017; Seago, 2020; Stevens et al., 2019; Stevens & Huddy, 2016; Sulé, 2015; Tembrioti & Tsangaridou, 2013; Tsompanaki, 2014; Wang, 2022), whereas only around 15% (n = 10) used quantitative methods (Altun & Atasoy, 2019; Bebetsos & Goulimaris, 2014; Hsia et al., 2022; DiPasquale et al., 2021; DiPasquale & Roberts, 2022; ElyaÃŸutu & Hazar, 2017; Liu, 2020; Pangayan, 2021; Szászi & Szabó, 2021; Yin & Liu; 2022) (Figure 4).

In addition, less than 10% (8.69%) relied on both qualitative and quantitative (i.e., mixed) methods (Cuellar-Moreno & Caballero-Juliá, 2019; Longley & Kensington-Miller, 2020; Papp-Danka & Lanszki, 2020; Purvis, 2018; Risner & Musil, 2017; Walker, 2019).

15% of the sample did not represent empirical research (Duffy, 2015; Dunbar-Hall et al., 2015; Dragon, 2015; Gaunt & Treacy, 2020; Jin & Martin, 2019; Kearns, 2016; Mills, 2014; Schmidt, 2020; Tembrioti & Tsangaridou, 2013). These articles were mostly literature reviews (Dragon, 2015; Dunbar-Hall et al., 2015; Gaunt & Treacy, 2020; Jin & Martin, 2019; Schmidt, 2020; Tembrioti & Tsangaridou, 2013) or descriptions of subjective experiences (Duffy, 2014; Kearns, 2016; Mills, 2014). The methodology of the subjective reports is mainly intuitive and rooted in personal observations (Baran, 2020). All 10 articles met our search criteria and thus remained

Figure 4. Research Design of Dance-Related Research in Higher Education between 2013 – 2023 (n = 69)
in the sample; however, it was concluded that what was considered research in these papers does not necessarily adhere to the research principles of triangulation (i.e., reliability, validity, and objectivity).

3.4 Research Instruments of Dance-Related Research in Higher Education

Our fourth research question pertained to the types of research instruments used in the examined articles. As mentioned in the previous chapter, dance-related research is an interdisciplinary area; as such, the choice of instruments can vary widely, and it is common to adapt measurement instruments from other disciplines. In qualitative research and action research in particular, interviews and surveys with open-ended questionnaires were employed in general case studies, while quantitative studies included tests measuring dance students’ mental and physical well-being (Altun & Altasoy, 2019; DiPasquale & Roberts, 2022; Hsia et al., 2022; Szászi & Szabó, 2021; Yin & Liu, 2022) (Table 2).

<table>
<thead>
<tr>
<th>Research Instrument</th>
<th>Research Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Qualitative</strong></td>
<td></td>
</tr>
<tr>
<td>Interviews (n = 26) &amp; Surveys with OE Questions</td>
<td>Thematic analysis of participants’ and researchers’) narratives</td>
</tr>
<tr>
<td>Observation (n = 5)</td>
<td>Trainer facilitated and observed training improvements</td>
</tr>
<tr>
<td>Video Entries (n = 1)</td>
<td>Captured visual data related to dance education processes</td>
</tr>
<tr>
<td>Systematic Literature Review (n = 1)</td>
<td>Provided comprehensive overviews</td>
</tr>
<tr>
<td><strong>Quantitative</strong></td>
<td></td>
</tr>
<tr>
<td>Tests (n = 4) and Questionnaires (n = 6)</td>
<td>Featured validated questionnaires and tests measuring dance students’ mental and physical well-being/stability</td>
</tr>
<tr>
<td>Observation (n = 1)</td>
<td>Comparison of teaching methods using statistical analysis</td>
</tr>
<tr>
<td>Data Mining (n = 1)</td>
<td>Movement analysis of motion capture data</td>
</tr>
</tbody>
</table>

*Table 2. The Types of Measurement Instruments employed in Relation to Research Focus and Research Methods*
In the following part of the chapter, the research methods are differentiated according to their analytical procedures.

3.4.1 Qualitative research instruments

In the context of dance education, action research (n = 17) was shown to be a powerful tool for sharing practical and experiential methods of incorporating new practices into dance courses. In these case studies on dance pedagogy, the instructors actively engaged with their students, observed the outcomes of instructional changes, and reflected on the impact of these modifications. In action research, the most frequently used method was the interview, sometimes combined with other qualitative methods such as questionnaires or observations. Such data were suitable for thematic content analysis.

Some of the studies employed the thematic analysis of dance class participants’ and researchers’ narratives (Domene & Morley, 2022; Dryburgh, 2020; Longley & Kensington-Miller, 2020). This approach aimed to gain an understanding of the lived experiences and perspectives of students and teachers within the dance community. By delving into these narratives, researchers could uncover stories, emotions, and subjective insights. These qualitative studies mainly concentrated on trainer-facilitated and observed improvements in training, and shed light on the role of instructors, the learning process, and the factors that contribute to students’ development. Three of these studies, mostly representing action research, followed a (auto)ethnographic research approach to interpret the data gained from (self) observations in dance classes (Dryburgh, 2020; Kaktikar, 2016; Ritchie & Brooker, 2018).

As mentioned, interviews were shown to be the most frequently used research instrument in qualitative dance-related studies (n = 26). Robinson (2016) used interviews to investigate the research behaviors of students in dance-related higher education. By engaging with the students, the study delved into their research practices, revealing the unique challenges and needs of budding dance scholars. On the academic front, several researchers, including Farrer (2018), Johnson (2018), Leijen and Sööt (2016), Lopez (2019), and Wang (2022), utilized interviews to explore the academic challenges faced by dance students. These interviews provided a platform for students to express their experiences and difficulties, shedding light on the educational landscape of dance. The process of learning dance, a multifaceted journey, has been investigated by scholars, as well. Researchers like Domene and Morle (2022), Higdon and Stevens (2017), Kattner (2016), Mitchel et al. (2018), ‘Ofamo’oni (2021), O’Leary et al. (2019), and Pulinkala (2014) employed interviews to collect rich data about the experiences of individuals engaged in the dance learning process. This approach enabled researchers to gain a profound understanding of the emotional and physical aspects of acquiring dance skills and knowledge. Conversely, institutional aspects of dance studies were the focus of Tsonmanaki’s (2014) work, in which interviews provided insight into the administrative and organizational dimensions of dance education and revealed the broader framework within which dance programs operate.
Several studies included questionnaires alongside interviews to gather subjective experiences related to teaching dance with an aging body. Researchers such as Sulé (2015), Assandri (2019), Cuellar-Moreno and Caballero-Juliá (2019), and Duffy (2022) explored this aspect, arriving at a comprehensive understanding of how aging impacts the teaching of dance. In regard to dance teaching methods, Musil (2017), Conner et al. (2021), and Longley and Kensington-Miller (2020) utilized both interviews and questionnaires to gain deeper insights into their chosen pedagogical approaches.

In order to gain a more comprehensive perspective, Haines and Torres (2016) took a multifaceted approach combining video recordings with interviews and surveys. This method provided an in-depth look at the dance learning process, capturing not participants’ verbal accounts but also visual data, thus enriching the research findings. Walker (2019) complemented interviews and surveys with a systematic literature review, offering a more comprehensive overview by combining the insights of practitioners with the existing body of knowledge in dance research. This approach combined different sources of information, thereby enhancing the rigor of the study. The use of interviews and surveys as research instruments was also combined with student observations in some studies (Pulinkala, 2014; Stevens & Huddy, 2016; Tsompanaki, 2014; Walker, 2019), whereas some studies only employed observations as a research instrument (Baran, 2020; Ritchie & Brooker, 2019).

Through interviews, participant observations, and content analysis, researchers in dance studies can gain a deeper understanding into the dynamics of training and the multifaceted process of improving dance skills. This research focus highlights the connection between trainers and dancers, underscoring the significance of pedagogy and mentorship in the pursuit of excellence within the art of dance.

3.4.2 Quantitative research instruments

The data collected through questionnaires and observations can also be examined using quantitative methods. Researchers in such studies designed surveys to collect data on a wider scale and obtain a larger sample of participants (e.g., n = 500, Liu, 2020). Questionnaires were used to provide quantifiable data that could be analyzed statistically, offering a more comprehensive view of trends and patterns within the dance community (Risner & Musil, 2017; Pangayan, 2021). Research from Bebetsos and Goulimarlis (2014), Hsia et al. (2022), and Szászi and Szabó (2021) used validated questionnaires to compare their results with those of other researchers in the field.

Of all the quantitative research articles identified in our review (n = 11), six either solely used questionnaires as their research tool (Bebetsos & Goulimarlis, 2014; Liu, 2020; Pangayan, 2021) or combined them with other quantitative research instruments, particularly tests (Hsia et al., 2022; Szászi & Szabó, 2021). As a result, measurement tests were also featured in our sample. DiPasquale conducted two different physical measurements: in one, a heart-rate variability test was implemented (DiPasquale & Roberts, 2022), while the other study utilized computer-assisted tests of dancers’ balance (DiPasquale et al., 2021). In the other studies, validated psychological measurement tools (n = 3) were used. Altun & Atasoy (2019) used the previously developed Folk Dance Course Attitude Scale, Bebetsos and Goulimarlis
(2014) adapted the Scale of Athlete Satisfaction questionnaire, DiPasquale et al. (2021) used the Recovery-Stress Questionnaire for Athletes among dance educators, and Szász and Szabó (2021) implemented the General Health Questionnaire, WHO Well-being Index, Body Satisfaction Questionnaire, and the Human Figure Drawing Test among university students involved in dance performance and education.

Two articles were reviewed in which unique quantitative measurements and research instruments were applied. In one research paper, the comparative success of traditional folk dance teaching methods and Laban Motion Notation was examined using a special quantitative evaluation form given to four referees who determined the levels and degree of success for each group (Elyağutu, & Hazar, 2017). Another new approach which has emerged in quantitative dance research is data mining, which was used to classify waltz and merengue movements gained by motion capture software (Yin & Liu, 2022).

Some dance studies employed validated instruments specifically designed for dance research, such as questionnaires assessing dance techniques or quantitative tools to capture dancers’ experiences (McCarthy-Brown, 2015; Pangayan, 2021). For instance, researchers may draw on tools from sports science or psychology to assess elements like physical performance and psychological well-being in dance (Altun & Atasoy, 2019; Szász & Szabó, 2021).

### 3.5 Research Topics of Dance-Related Research in Higher Education

The focal point of our fifth research question was understanding the topics investigated in dance-related research over the last 10 years in the context of higher education. To this end, our review examined what the main subjects of recent dance research were and what topics were underrepresented in the examined papers. This exploration unveiled the key research fields and topics that have emerged in the last decade. It is important to highlight that some papers could cover more than one research topic. In Table 3, research topics are grouped into larger units, forming six main research fields.
The most prevalent research domain was at the intersection of dance and society \((n = 43)\). Researchers have delved into interdisciplinary themes such as environmental literacy and collaboration (Liu, 2020; Petsidas et al., 2019; Gaunt & Treacy, 2022) and provided insights into the profound philosophical and ideological underpinnings of...
dance (Clendinning, 2022; Ehrenberg, 2020; Jin & Martin, 2019; Kaktikar, 2016; Mills, 2014; ‘Ofamo’oni, 2021; Rimmer, 2017; Walker, 2019). Furthermore, studies centered on dancers’ careers and the challenges they face during their studies and workplaces were also identified in our systematic review (Duffy, 2020; Gaunt & Treacy, 2022; Farrer, 2018; Higdon & Stevens, 2017; Lopez, 2019; ‘Ofamo’oni, 2021; Risner & Musil, 2017; Tsompanaki, 2014). Inclusivity and outreach in dance classes have also received researchers’ attention (Brown, 2022; Clendinning, 2022; DiPasquale & Roberts, 2022; McCarthy-Brown, 2015; Mitchell et al., 2018; Wang, 2022), with studies addressing the importance of making dance education accessible to diverse populations. Additionally, studies investigating inter- and multicultural dance classrooms (Clendinning, 2022; Jin & Martin, 2019; Johnson, 2018; Kaktikar, 2016; McCarthy-Brown, 2015; Stevens et al., 2019; Wang, 2022) as well as democracy and equality in tertiary dance education (Patton et al., 2022; Risner & Barr, 2015; Ritchie & Brooker, 2018; Sué, 2015, Walker, 2019) have further enriched this research field.

In the interdisciplinary domain of dance and culture studies, we also found (auto) ethnographic investigations into the roots of different dance styles (Bonner 2022; Dryburgh, 2020; Kaktikar, 2016; Patton et al., 2022; Risner & Musil, 2017; Ritchie & Brooker, 2018).

Some of the previously mentioned studies at the intersection of dance the fields of social and cultural have thematized classroom processes, as well. This is evidenced by the results of our systematic review, showing that the second largest research field includes studies on methodological topics in the dance classroom and the relationship between dance and subject pedagogy (n = 34). The majority of the recent studies in this field are based on dance method-centered experimental and reflective action research (Assandri, 2019; Baran, 2020; Barton & Ryan, 2014; Dragon, 2015; Dryburgh, 2020; Dryburgh & Jackson, 2016; Duffy, 2022; Dunbar-Hall et al., 2015; Ehrenberg, 2020; ElyaÅŸutu & Hazar, 2017; Johnson, 2018; Haines & Torres, 2016; Hsia et al., 2022; Kaktikar, 2016; Kattner, 2016; Kearns, 2016; Leijen & Sööt, 2016; Petsilas et al., 2019; Rimmer, 2017; Ritchie & Brooker, 2018; Roe, 2017; Salcedo et al., 2017; Seago, 2020; Stevens et al., 2019; Stevens & Huddy, 2016; Tembrioti & Tsangadidou, 2013). A special research focus identified in this area is the extent to which dance is present in physical education classes (Altun & Altasoy, 2019; Cuellar-Moreno & Caballero-Juliá, 2019; O’Leary et al., 2019); in addition, two articles highlighted the importance of teaching dance history in tertiary dance education (Dragon, 2015; Kattner, 2016). Distance and e-learning practices in dance education were also discussed in our sample (Bebetsos & Goulimaris, 2014; Pangayan, 2021, Papp-Danka & Lanszki, 2020).

In the dance-related research reviewed, there is a significant number of studies related to institutional dance teaching programs and curricula (n = 20). Half of these papers (n = 10) discussed dance teacher training (Brown, 2022; DiPasquale et al., 2021; Dragon, 2015; Duffy, 2022; Leijen & Sööt, 2016; McCarthy-Brown, 2015; Risner & Musil, 2017; Robinson, 2016; Stevens & Huddy, 2016; Wang, 2022), while the other half focused on university dance teaching curricula and institutional partnerships (Duffy, 2019, Ehrenberg, 2020; Schmidt, 2020; Stevens & Huddy, 2016; Kelsey & Uytterhoeven, 2016; Longley & Kensington-Miller, 2020; Pulinkala, 2014, Risner & Barr, 2015; Stevens et al., 2019; Walker, 2019).
The development of students’ dance skills has also been a central focus of research attention over the last ten years. Three studies in our sample thematized the academic competencies, specifically the research and reading skills of dance scholars and educators in training (Johnson et al., 2019; McCarthy-Brown, 2015; Robinson, 2016). However, twenty-first-century skills such as critical thinking, creativity, and problem-solving also emerged as research topics in this domain (Cuellar-Moreno & Caballero-Juliá, 2019; Duffy, 2015; Ehrenberg, 2020; Gaunt & Treacy, 2022; Kearns, 2016; Mills, 2014; Patton et al., 2022; Petsidas et al., 2019; Risner & Barr, 2017; Roe, 2017; Salcedo et al., 2017). In addition to the development of academic and soft skills (Johnson et al., 2019; McCarthy-Brown, 2015; Robinson, 2016), the assessment of mental and physical health in relation to dance was also identified as an important research area (n = 11). Dancers’ life and health management skills (Conner et al., 2021; Dean et al., 2014; DiPasquale et al., 2021; Risner & Musil, 2017; Duffy, 2020; Szászi & Szabó, 2021) as well as the mental and physical health of dance students (DiPasquale & Roberts, 2022; DiPasquale et al., 2021; Szászi & Szabó, 2021) were also extensively examined in the last 10 years. Moreover, two studies explored dancers’ well-being through dance (Domene & Morley, 2022; Lopez, 2019).

Designing and creating choreographies is also a central focus of studies in tertiary dance education as evidenced by the academic attention it received in our sample. The process of developing and learning choreography was the focal point of five papers (Duffy, 2015, 2022; Kelsey & Uytterhoeven, 2016; Ehrenberg, 2020; Mitchell et al., 2018), while movement analysis (ÉlyaÄŸutu & Hazar, 2017; Yin & Liu, 2022) was discussed in two articles.

4. DISCUSSION

Our systematic review examined 69 articles focusing on dance-related research in higher education. As researchers, we set out to uncover which dance genres in which geographical areas have commanded attention in the realm of dance-related research in the higher education context over the past 10 years, as well as what research methods have been utilized and what research topics have been explored. Our initial hypothesis posited that classical ballet would emerge as the central focus of empirical investigation, but it wasn’t confirmed because contemporary dance was the most frequently examined dance genre among the 69 articles. It appears that the innovative and experimental nature of contemporary dance has captivated the attention of researchers. Traditional local and folk dances were shown to be the second most represented dance type in this research area. These dances serve as repositories of culture, encapsulating the heritage, values, and identity of various communities or regions and offering a rich tapestry of distinctive movement vocabularies, music, costumes, and rituals, making them a goldmine for exploration in the higher education context. However, it was also observed that certain dance genres, such as ballroom, Latin, and Latin-American dance, musical theatre dance and hip-hop were underrepresented in our sample. This can be attributed, in part, to these dance forms being marginalized within higher educational programs and curricula. Some institutions may lack faculty members with expertise in these forms of dance, limiting both research opportunities and course availability.
The prevalence of the three dance types (i.e., folk or traditional dance, classical ballet, and modern dance), as well as the underrepresentation of other dance types, seems to reflect their prestige and the degree to which they are historically rooted in society. In a broader context, many academic institutions and dance programs have traditionally placed significant emphasis on contemporary and modern dance forms or classical ballet due to their longstanding presence in the Western dance canon. This emphasis sometimes overshadows the diversity of dance genres, creating the imbalance which can be seen in dance research.

Regarding geographical distribution of the studies, our hypothesis was confirmed. The overwhelming majority of dance-related research in the higher education context has been published in English-speaking countries, mainly the United States. Further studies published in English are needed to fill the gap in research on various aspects of dance in higher education in national contexts where the native language is not English.

In regard to qualitative research, action research in dance education has proven to be an effective methodological approach. These studies involved active engagement between instructors and students, observations of instructional changes, and reflection on their impacts. The most frequently employed methods within the action research studies examined were interviews, sometimes complemented with questionnaires or observations, all contributing to valuable data for thematic content analysis. Some qualitative studies adopted a thematic analysis approach, delving into the narratives of dance class participants and researchers to understand their lived experiences and perspectives within the dance community. The (auto)ethnographic research approach was a preferred choice in many of these studies, which offered a deeper understanding into the emotional and physical aspects of dance. Moreover, interviews were combined with questionnaires in some studies. In a few papers, interviews and surveys were used in conjunction with student observations, while other studies only relied on observations as their research instrument.

The fact that the overwhelming majority of research was of a qualitative nature could be explained by the fact that the chosen research field mainly requires a qualitative approach. However, a distinct lack of objective, quantitative methodology in dance-related research in higher education was identified by the present study. In addition, educational development must be built on the measurement of the status quo from where the improvement can commence. Therefore, in order to advance tertiary dance education, there is a marked need for quantitative methodologies.

Given that qualitative research designs are typically opted for in dance research, the research instruments applied are generally those utilized in qualitative research. The quantitative research instruments employed in dance studies were predominantly surveys, data mining (related to motion capture software) and some measurement tests assessing various physical and psychological aspects within the context of dance.

The underrepresentation of quantitative data collection in dance research could be attributed to several factors. First, researchers in the field of dance might come from an art or dance background, whose language is more expressive than database-based. Consequently, they may prefer to analyze verbal information to explore factors affecting dance education or conduct action research to develop teaching methodology.
Second, scholars of the arts, such as the authors of dance-related research, might not possess the scientific grounding necessary to devise measurement instruments or carry out statistical analysis of quantitative data. Third, the development of tertiary dance education – the primary aim of which is to produce the dance artists of the future – has likely not developed along the same line of principles and at such a pace as, for instance, sports science, where multiple variables and indicators of performance have long been researched in order to achieve increasingly higher measurable results while maintaining lower rates of injury. This discrepancy may be explained by differences in the financial backing, support, and interests behind dance and sports. Research methodologies and the appropriate instruments borrowed from the world of physical education and sport, for example, might bring about an advancement of quantitative dance-related research in the context of higher education.

In regard to the research fields identified in relation to dance research in higher education, one prominent area of exploration is the intersection of dance and society. Researchers have engaged with interdisciplinary themes such as environmental literacy and collaboration, shedding light on the profound philosophical and ideological underpinnings of dance. This multifaceted exploration extends to dancers’ careers and the challenges they face during their studies and in their workplaces. Inclusivity and outreach in dance classes have also garnered researchers’ attention. Furthermore, studies focusing on inter- or multicultural dance classrooms, democracy, and equality in tertiary dance education have enriched this research field, fostering a broader understanding of the cultural dimensions of dance.

Within this interdisciplinary domain of dance and culture studies, (auto) ethnographic investigations into the roots of different dance styles have illuminated the historical and cultural connotations of dance.

Another significant area of research focuses on methodological aspects of the dance classroom and the connection between dance and subject pedagogy. The presence of dance in physical education classes has also been examined, as well as the importance of teaching dance history in tertiary education contexts. The adoption of distance and e-learning practices in dance education has also been a subject of academic discourse. In addition, institutional dance teaching programs and curricula have been the focus of several papers delving into dance teacher training curricula and institutional partnerships. Choreography creation and movement analysis have also been central topics researched in the context of tertiary dance education, with a focus on developing and learning choreography.

Skills development among dance students was identified as a central theme as well, with research exploring academic competencies, critical thinking, creativity, and problem-solving, alongside the assessment of mental and physical health in relation to dance. Dancers’ life and health management skills and the mental and physical well-being of dance students were also examined in the reviewed studies.

5. CONCLUSION

One of the limitations of this research was that our review process restricted the inclusion of studies to a specific time frame, which may result in earlier relevant research being left out. This overlooking of earlier insights may have distorted
our results. The main limitation of the study is that only papers written in English were included due to the limited foreign language capacity of the reviewers. This excluded a multiplicity of publications written in other languages. On the other hand, however valuable and insightful they might be, non-English publications are not typically represented in great numbers in the databases used in this review, at least not in proportion to the diversity of the original language of all published dance-related research globally. If all non-English dance-related studies in the context of tertiary education published in the last decade could be included in the review, a much more precise and representative understanding could be gained. As such, this review could not avoid the occurrence of language bias as non-English-language research from non-English-speaking regions could not be included in our sample. It is also important to note that the sample was limited to research in higher education. There is a plethora of studies related to dance, but the scope of this research did not allow us to address other aspects of research on dance (e.g., in public education or professional dance).

The articles reviewed also outlined new research directions representing emerging but not yet fully explored topics, particularly in regard to 21st-century skills and their relevance in dance education. Investigating how dance students develop critical thinking, creativity, and problem-solving skills in a rapidly evolving world is essential for the effective adaption of curricula. Additionally, delving into the mental and physical well-being of dance students is crucial. Research in this area can provide insights into the holistic health of dancers, offering ways to better support their physical and mental needs in the rigorous world of dance education. Further research into currently marginalized types of dance would enrich not only the available research literature but would also strengthen the social acceptance of these dances through the transfer of knowledge about them. Exploring these domains would contribute significantly to the evolution and improvement of tertiary dance education.

References


DANCE-RELATED RESEARCH IN TERTIARY EDUCATION


