2024, Retos, 59, 881-891

Teaching Life Skills to Students with Disabilities in Physical Education: Publication Trend in the Last 51 Years

Enseñar habilidades para la vida a estudiantes con discapacidad en educación física: Tendencia de publicación en los ultimos 51 años

*Razali, *Mansur, **Jusuf Blegur, ***Berliana, ****Muhamad Ilham, ***Muhammad Nur Alif, ***Iis Sintiani, *****Mieke Souisa, ******Ade Evriansyah Lubis, **Zuvyati Aryani Tlonaen

*Universitas Syiah Kuala (Indonesia), **Universitas Kristen Artha Wacana (Indonesia), ***Universitas Pendidikan Indonesia (Indonesia), ****Universitas Negeri Jakarta (Indonesia), *****Universitas Pattimura (Indonesia), ******Sekolah Tinggi Olahraga dan Kesehatan Bina Guna (Indonesia)

Abstract. Life skills have been proven to help students overcome various problems. Therefore, they have been integrated into various student learning activities. However, have life skills also been integrated into physical education teaching for students with disabilities? This study aims to investigate the bibliometric publication of articles on teaching life skills to students with disabilities in physical education. The inspection was conducted on June 1, 2024, based on the Scopus platform using the term "teaching life skills to students with disabilities in physical education" with the doc-type article, review, and conference paper. In addition to using the Scopus analysis engine, researchers used metric analysis from Publish or Perish and visualization analysis from VOSviewer. Over the past 51 years, researchers have only managed to publish 18 Scopus documents on teaching life skills in physical education for students with disabilities. In addition, from the keyword corpus, only the keyword "disability" has networking with the keyword "daily life activity," unfortunately the networking is the furthest from other keywords. Meanwhile, from the title and abstract corpus, the term "life skills" was not found in the networking map. Thus, teaching life skills in physical education for people with disabilities has not received serious attention from researchers worldwide, so future studies on teaching life skills in physical education for people with disabilities have great potential to be explored. Future investigations can expand data collection platforms beyond Scopus, such as WoS, ERIC, DOAJ, and others, to gather more comprehensive data in discussing life skills teaching for students with disabilities in physical education.
Keywords: Physical education for disabilities, life skills for students with disabilities, inclusive physical education, bibliometric study

Resumen. Se ha demostrado que las habilidades para la vida ayudan a los estudiantes a superar diversos problemas. Por lo tanto, se han integrado en diversas actividades de aprendizaje de los estudiantes. Sin embargo, ¿se han integrado también las habilidades para la vida en la enseñanza de educación física para estudiantes con discapacidad? Este estudio tiene como objetivo investigar la publicación bibliométrica de artículos sobre la enseñanza de habilidades para la vida a estudiantes con discapacidad en educación física. La inspección se realizó el 1 de junio de 2024, con base en la plataforma Scopus utilizando el término "enseñanza de habilidades para la vida a estudiantes con discapacidad en educación física" con el artículo de tipo doc, revisión y artículo de conferencia. Además de utilizar el motor de análisis de Scopus, los investigadores utilizaron el análisis métrico de Publish or Perish y el análisis de visualización de VOSviewer. Durante los últimos 51 años, los investigadores solo han logrado publicar 18 documentos de Scopus sobre la enseñanza de habilidades para la vida en educación física para estudiantes con discapacidad. Además, del corpus de palabras clave, solo la palabra clave "discapacidad" tiene redes con la palabra clave "actividad de la vida diaria", lamentablemente la red es la más alejada de otras palabras clave. Mientras tanto, en el corpus de títulos y resúmenes no se encontró el término "habilidades para la vida" en el mapa de redes. Por lo tanto, la enseñanza de habilidades para la vida en educación física para personas con discapacidades no ha recibido una atención seria por parte de los investigadores de todo el mundo, por lo que los estudios futuros sobre la enseñanza de habilidades para la vida en educación física para personas con discapacidades tienen un gran potencial para ser explorados. Las investigaciones futuras pueden ampliar las plataformas de recopilación de datos más allá de Scopus, como WoS, ERIC, DOAJ y otras, para recopilar datos más completos al analizar la enseñanza de habilidades para la vida para estudiantes con discapacidades en educación física.
Palabras clave: Educación física para personas con discapacidad, habilidades para la vida de estudiantes con discapacidad, educación física inclusiva, estudio bibliométrico

Fecha recepción: 08-06-24. Fecha de aceptación: 27-08-24
Razali
razali.ismail@usk.ac.id

Introduction

Efforts to create a curriculum framework for life skills (LS) in physical education (PE) for students with disabilities need to begin with limiting the concept of life skills itself. In this context, the definition of LS is adopted from the concept of Kendellen et al. (2017), namely "*Psychological assets, values, and skills that enable individuals to effectively deal with the demands and challenges of everyday life*." However, the LS view from Jones and Lavallee (2009) is needed to complement the previous definition of Kendellen et al. (2017). The definition of LS must be able to reach psychological assets, values, and skills that help people develop. It means that LS is not limited to psychological assets, values, and skills that help individuals overcome life's challenges; it also helps individuals develop themselves, including turning challenges into opportunities to adapt to the various demands of changing times.

Recently, researchers have begun to focus heavily on investigating LS in physical activity and sports. For example, the successful integration of LS into student physical activity programs (Cronin et al., 2020; Goudas et al., 2006; Ivy et al., 2018; Jacobs et al., 2022; Lee et al., 2017; Nugraha et al., 2022; Suardika et al., 2021), university students (Anira et al., 2021), and in exercise and sports activities (Ciampolini et al., 2020; Hadiana et al., 2021; Kendellen et al.,

2017). The question is, have the benefits of life skills (LS) also been integrated into the movement learning experiences of students with disabilities, considering that physical education is an ideal field due to its features that allow for inclusion projects (Gámez-Calvo et al., 2024; Ocete Calvo et al., 2015; Reina et al., 2016), such as promoting LS? This is an important need because, in facing various real-life challenges, students with disabilities are more challenged to overcome them due to the various "unique" modalities they possess. Therefore, if we need to be honest, they actually need LS more, because LS programs are significant for the quality of human resources in youth to carry out daily activities (Sonjaya et al., 2024).

Life skills have been believed to help students with disabilities to survive better because they provide students with various skill dimensions. For example, Papacharisis et al. (2005) offer LS dimensions such as goal setting, positive thinking, and problem-solving. Rachman (2009) offers LS dimensions such as self-understanding and thinking skills, communication, collaboration, formulating hypotheses, designing and implementing research, and vocational skills. Kendellen et al. (2017) offer LS dimensions such as focus, sportsmanship, perseverance, goal setting, emotional regulation, honesty, teamwork, and respect. As well as other more complete LS dimensions include teamwork, goal setting, time management, emotional skills, interpersonal communication, social skills, leadership, and problem-solving and decision-making (Cronin et al., 2020; Cronin & Allen, 2017).

In addition to its dimensions, LS integration is also greatly determined by the teacher's model and strategy. Generally, the integration process can use learning models developed so far (e.g. scientific learning, cooperative learning, project-based learning). Teachers can also try out the strategies offered by Kendellen et al. (2017), such as (1) focusing on one life skill per lesson, (2) introducing life skills at the beginning of the lesson, (3) applying strategies to teach life skills throughout the lesson, and 4) ask about life skills at the end of the lesson. Alternatively, use a participatory action study from Knudsen et al. (2020), which consists of four stages in which teachers are involved in designing, planning, implementing, and evaluating LS courses for students. Ciampolini et al. (2020) also offer five protocols for integrating students' LS: (1) selecting and discussing LS at each meeting; (2) practicing the selected LS, (3) integrating LS during practice, (4) discussing and reflecting on the application of LS and transfer to other contexts, and (5) creating opportunities to facilitate LS transfer.

If we simplify the integration protocol above, it has existed in learning practices, which are then known as preliminary, core, and closing activities. However, the acceleration of teacher strategies when using or integrating LS dramatically determines the success of their teaching. LS integration must be manifested in students' learning experiences during learning, resulting in reflective experiences from students to train their LS. Some examples are teachers asking students to lead in heterogeneous learning groups (dimensions of collaboration and leadership), accustoming students to evaluate the performance of their peers in learning (dimensions of honesty and analytical thinking), students are accustomed to solving problems (dimensions of problem-solving), students are accustomed to leading games (dimensions of decision making) and others. Thus, the success of fostering students' LS is not just in the program plan but how teachers realize it in students' articulate learning experiences so that the LS program has a significant impact.

Life skills and physical education are essential for disabled people. Therefore, we need to investigate the attention of researchers to produce academic documents that contribute to the development of life skills in physical education for disabled people because globally, the availability of these documents is still limited, thus hindering teachers or practitioners in the field from trying them out in their classrooms. Considering the above problems, this study aims to investigate the bibliometric publication of articles on teaching LS to disabled students in physical education. These findings will provide an important "road map" for future researchers in developing quality LS research in physical education for disabled people.

Methods

To answer the study's needs, we used bibliometric analysis. According to Donthu et al. (2021), Mejia et al. (2021), and Blegur et al. (2024) bibliometric analysis helps researchers develop science and technology in a particular field to help researchers determine priority and meaningful decisions for their future studies. Furthermore, Blegur et al. (2023) and Marmoah et al. (2022) added that bibliometric analysis helps researchers to make updates and contribute more significantly to the advancement of science and technology in related fields because they always look for limitations of current research to create opportunities for future research.

We began the investigation on June 1, 2024. There might be additional articles (>18 documents) during the review and publication process due to the indexing process of the Scopus database, which takes several months. First, to guide the investigation process, we defined "*teaching life skills to students with disabilities in physical education*" in the Scopus inspection engine in the article title, abstract, and keyword sections. We also limited the inspection to three doc types: articles, reviews, and conference papers. The results of the Scopus database inspection for 51 years (1973-2024) only found 18 documents. Each article type was 72.2%, the review type was 22.2%, and the conference paper type was 5.6% (see Figure 1).

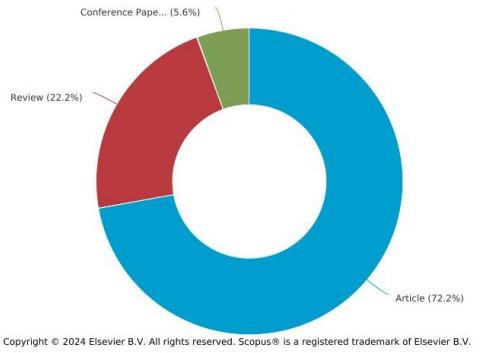

Figure 1. Document by type

Second, the 18 documents were analyzed from the Scopus engine to see the description or trend per year, documents by source, documents by author and others. In addition, the inspection data from the Scopus engine was also imported into Comma Separated Values (CSV) and Research Information Systems (RIS) formats to make it easier for researchers to document publication metrics from Publish or Perish (https://harzing.com/resources/publish-or-perish) as in Table 1. In addition, researchers also provide alternative formats for visualization analysis using the VOSviewer application according to the protocol developed by Jan van Eck and Waltman (2023).

Table 1.
Citation metrics from Publish or Perish (PoP)

Citation metrics	Teaching life skills to students with disabilities in physical education
Publication years	1973-2024
Citation years	51 (1973-2024)
Papers	18
Citations	151
Cites/years	2.96
Cites/paper	8.39
Cites/author	84.00
Papers/author	10.12
Authors/paper	2.33
h-index	36
g-index	12
hl, norm	6
hl, annual	0.12
hA-index	3

Finally, we used the VOSviewer application (https://www.vosviewer.com) to analyze the citation trends (unit of analysis), co-occurrences (keywords), and title and abstract of the data corpus (CSV and/or RIS) to examine its visualization (including network and overlay). The VOSviewer output is presented in table and figure formats while discussing it with previous research to diagnose the potential for future research as an effort to promote life skills in adaptive physical education or physical education for students with disabilities that are transformative, contributive, and meaningful.

Results

Publication Trends

Document by years

The inspection results of the term "*teaching life skills to students with disabilities in physical education*" from the Scopus database for the last 51 years have only found 18 articles spread across 14 productive years. The highest publication was only two documents (11.1%), namely in 1973, 1992, 2016, and the latest in 2023 (see Figure 2). While in the other ten years, we only managed to publish 1 document (5.6%). This finding confirms that in the last 51 years, 72.5% of the years were not productive for publishing articles on life skills for children with disabilities in physical education.

Since 1973, Bentzen (1973) and Nagler (1973) have each succeeded in publishing articles on related topics. Unfortunately, the "pioneer" publication did not result in a positive trend in subsequent. It was not until 11 years later that, Warren and Taylor (1984) published their article entitled "*Education of children with learning problems*." Not only that, this low trend has persisted to the present day, with only two notable documents successfully published on this topic. This ongoing trend again confirms that publishing articles on LS in physical education learning for students with disabilities still has significant potential for future investigation.

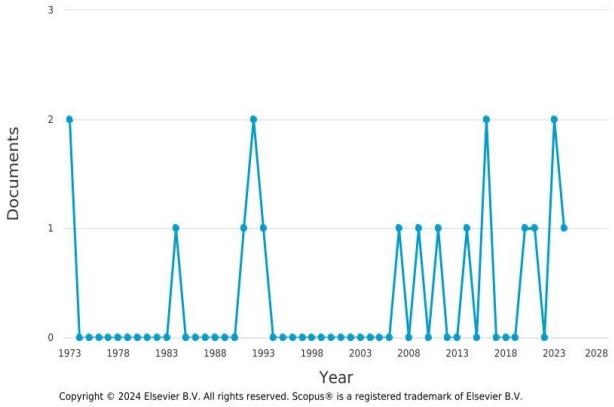

Figure 2. Document by years

Document per years by source

The document by source trend report should serve as a reference for future researchers when submitting and publishing their study results. As visualized in Figure 3, most sources (2 documents) published articles with titles, abstract, and keyword "*teaching life skills to students with disabilities in physical education*" is Adapted Physical Activity Quarterly (APAQ) (https://journals.humankinetics.com/view/journals/apaq/apaq-overview.xml). Block (1992) wrote the first published article under the title. "*What is appropriate physical education for students with profound disabilities?*" and the second article was written by Krebs and Block (1992) with the title "*Transition of students with disabilities into community recreation: The role of the adapted physical educator*."

APAQ is a platform that provides an opportunity for scientific research results on physical activity for individuals with disabilities. Human Kinetics Publishers Inc manages APAQ and has been consistently indexed by Scopus for 36 years (1988-2024), so it has high credibility in publishing

research works by researchers. Currently (June 6, 2024), APAQ is indexed by Scopus quartile 2 with 61st percentile (https://www.scopus.com/sourceid/21595), and the Scimago Journal and Country Rank value (2023) is 0.49 (https://www.scimagojr.com/journalsearch.php?q=21595&tip=sid&clean=0).

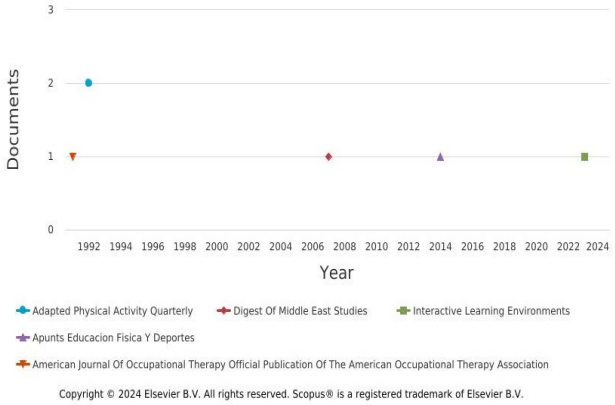

Figure 3. Document per years by source

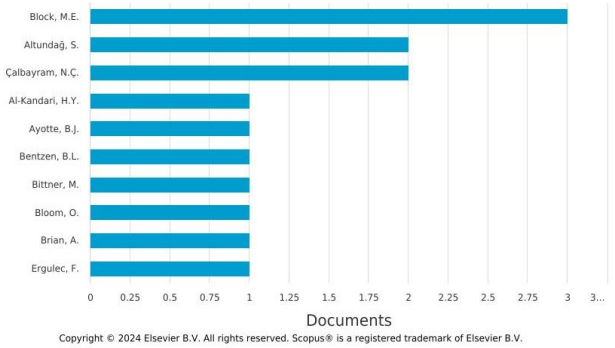

Figure 4. Document by authors

Document by authors

Professor Martin E. Block from the University of Virginia (https://scholar.google.com/citations?hl=id&user=77YRU9wAAAAJ&view_op=list_works) occupies the highest document by author trend after successfully publishing three articles in the field of physical education for disabilities (16.7%) (see Figure 4). He published two of them as the first author, namely a review article (single author) entitled "*What is appropriate physical education for students with profound disabilities?*" which he published in 1992 and has been cited 60 times overall (from Google Scholar).

Second, a research article entitled "*Exploring future research in adapted physical education*," published with three other colleagues, namely Justin Haegele from Old Dominion University, Luke Kelly, who is affiliated with Martin E. Block at the University of Virginia, and the third is Iva Obrusnikova University of Delaware. Another review article entitled "*Transition of students with disabilities into community recreation: The role of the adapted physical educator*" as a member author (of two authors) was published in collaboration with Patricia L. Krebs from Special Olympics International.

Document by affiliation

The trend of documents by affiliation is also minimal, with only three affiliations having successfully published two documents each using the term "*teaching life skills to students with disabilities in physical education"* namely from Ankara University, Pamukkale University, and the University of Virginia (see Figure 5). For example, two articles published with the University of Virginia affiliation include an article entitled "*What is appropriate physical education for students with profound disabilities?*" which was also written by Block (1992) and another article also written by Block et al. (2021) entitled "*Exploring future research in adapted physical education*." Other affiliates only managed to publish 1 document, some of which were Kuwait University and Arabian Gulf University in one article entitled "*Effect of a disability course on prospective educators' attitudes toward individuals with mental retardation"* written by Salih and Al-Kandari (2007) affiliated with Special Olympics International with an article entitled "*Transition of students with disabilities into community recreation: The role of the adapted physical educator*," written by Krebs and Block (1992).

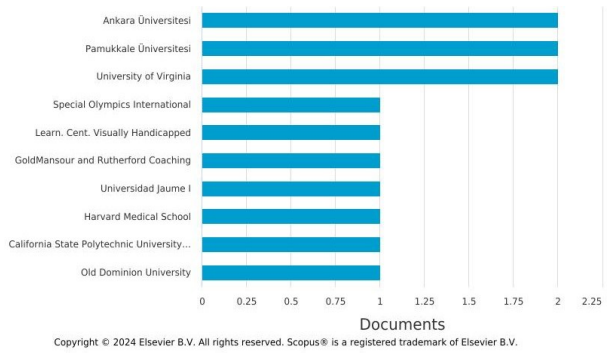

Figure 5. Document by affiliation

Document by country

When tracking by country, it turns out that the publication of 18 articles using the term "*teaching life skills to students with disabilities in physical education"* was limited to just five countries, the United States, Turkey, Bahrain, Kuwait, and Spain. The United States is still dominant in maintaining its publication trend by contributing 77.8% of the other four countries, Turkey contributing 16.7%, and Bahrain, Kuwait, and Spain each contributing only 5.6% (see Figure 6). Furthermore, authors from Bahrain and Kuwait, namely Salih and Al-Kandari (2007), jointly published an article entitled "*Effect of a disability course on prospective educators' attitudes toward individuals with mental retardation*." While Spain recorded three authors, namely Peris et al. (2014), who published one article entitled "*Service-learning methodology in physical education (La metodología del aprendizaje-servicio en la educación física)*."

Considering the data above, there is a promising opportunity for collaborative research and publication on teaching life skills to children with disabilities in physical education in the United States, while also exploring collaborations with authors from three other countries. Although Figure 6

does not yet record the country of Indonesia, it does not mean that Indonesian authors ignore the topic of life skills in physical education. Indonesian authors have recorded life skills publications in the Scopus database, such as articles published by Hadiana et al. (2022) entitled "*Life skill development through pencak silat martial arts training: An intentionally structured positive youth development program*," and articles published by Razali et al. (2024) entitled "*Physical education teachers' experiences in promoting life skills using differentiated instruction.*" However, the documents have not yet highlighted the issue of teaching life skills to students with disabilities. Indonesian researchers can pay attention to the gap in this trend in their future research to significantly contribute to improving physical education quality for students with disabilities.

Citation Trends

The article entitled "*Service-learning methodology in physical education (La metodología del aprendizaje-servicio en la educación física)*" written by Peris et al. (2014) has been cited 25 times (for Scopus documents) placing it at the top of the top citations (see Table 2). Meanwhile, if observed as a whole (including from non-Scopus documents), the article has been cited in 116 documents, including the article entitled "*Service-learning and motor skills in initial teacher training: Doubling down on inclusive education (Aprendizaje-servicio y motricidad en la formation of initial docente: Una apuesta educativa inclusiva)*," written by Maravé-Vivas et al. (2023). On the other hand, the lowest citation of 12 times was in the article entitled "*What is appropriate physical education for students with profound disabilities?*" written by Block (1992).

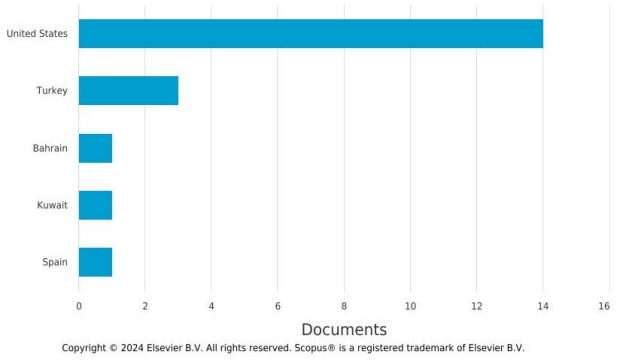

Figure 6. Document by country

Table 2.
Five top citations

No.	Cites	Authors (years)	Title	Publication identity
1	25	Peris et al. (2014)	Service-learning methodology in physical education (La metodología del aprendizaje-servicio en la educación física)	Apunts. Educacion Fisica y Deportes, (2014), 116(1), 33-43
2	19	Taylor and Manguno (1991)	Use of treatment activities in occupational therapy	The American Journal of Occupational Therapy: Official Publication of the American Occupational Therapy Association, (1991), 45(4), 317-322
3	18	Wallace (1993)	Psychiatric rehabilitation	Psychopharmacology Bulletin (1993) 29(4) 537-548
4	16	Altundağ and Çalbayram (2016)	Teaching menstrual care skills to intellectually disabled female students	Journal of Clinical Nursing, (2016), 25(13-14), 1962-1968
5	12	Block (1992)	What is appropriate physical education for students with profound disabilities?	Adapted Physical Activity Quarterly, (1992), 9(3), 197-213

Beyond of the top five citations, four articles have never been cited (0 citations). Each of the articles written by Bentzen (1973) is entitled "*Transfer of learning from school setting to life style in a habilitation program for multiply handicapped blind persons*." Second, the article by Nagler (1973) is entitled "*Participation in medical undergraduate training by the department of rehabilitation medicine*." Third, the article written by Pekmezaris et al. (2023) is entitled "*Experiences and recommendations from people with spinal cord injury following participation in a disability education session at an allopathic medical school: A qualitative study*." The last, the article written by McNamara et al. (2024) is entitled "*Content acquisition podcasts vs open-access podcast: Improving preservice physical educators' ability to teach students with visual impairments*."

Furthermore, researchers conducted a VOSviewer analysis of the data source from Scopus (CSV format) using citation (unit of analysis). Based on the documents, the results show that the article by Peris et al. (2014) has the highest citation trend, with 25 citations and 0 links. Based on sources, Adapted Physical Activity Quarterly has the highest trend by publishing two documents, 20 citations, and 0 total link strength. Based on the authors, Altundağ and Çalbayram (2016) has the highest trend by successfully publishing two documents, 17 citations, and 0 total link strength. Finally, if based on countries, the United States has a higher trend by publishing 14 documents, 98 citations, and 0 total link strength (see Table 3).

Table 3.
Trend citation based on unit of analysis

Document	Sources	Authors	Countries
Peris et al. (2014) (25 citation; 0 link)	Adapted Physical Activity Quarterly (2 documents; 20 citations; 0 total link strength)	Altundağ and Çalbayram (2016) (2 documents; 17 citations; 0 total link strength)	United States (14 documents; 98 citations; 0 total link strength)

Keywords (Co-Occurrence) Trends

The keyword trend uses the type of analysis of the co-occurrence and counting method keyword using the full counting method, and the minimum number of occurrences of a keyword is 3 (from a maximum of 5), thus producing 14 meets the threshold of 156 keywords. The analysis results of 14 selected items, forming 2 clusters, 74 links, and 154 total link strengths (see Table 4).

Table 4.
Cluster of 14 items

Cluster	Colour	Items	Total
1	Red	Curriculum, daily life activity, disabled person, disabled persons, education, human, humans, students	8 item
2	Green	Disability, physical education, review, skill, student, teaching	6 item

Figure 7 shows that the keyword "life skills" is not found in the VOSViewer visualization. However, several keywords can be used as discussion material because they are important and relevant, including the keyword *"daily life activity*." First, the keyword *"teaching"* does not have networking with the keyword *"daily life activity."* Second, the keyword "physical education" also does not have networking with the keyword *"daily life activity."* Third, the keyword *"disability"* has networking with the keyword *"daily life activity*," unfortunately the form of networking is the furthest from the other keywords. Based on these three findings, it is concluded that the study of LS teaching in physical education for disabilities is a potential study for future researchers.

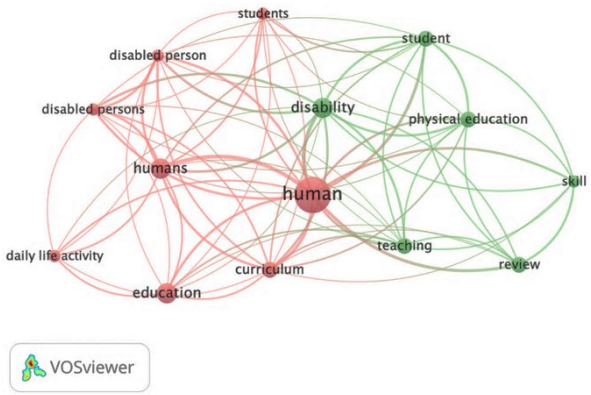

Figure 7. Network visualization of keywords (co-occurrence) trends

Title and Abstract Trends

Visualization analysis is extended to the title and abstract trend using the fields from which the term will be extracted are the title and abstract fields with the full counting method, and the minimum number of occurrences of a term is 10 (from a maximum of 45), thus producing 14 meet the threshold of the 936 terms. In the chosen number of terms displayed, the default choice is to select the 60% most relevant term, and the number of terms to be selected is 10. The analysis results of 10 selected items, forming 3 clusters, 39 links, and 8,422 total link strengths (see Table 5).

Table 5.
Cluster of 10 items

Cluster	Colour	Items	Total
1	Red	Child, practice, skill, student, training	5 item
2	Green	Attitude, disability, individual, person	4 item
3	Blue	Evidence	1 item

Furthermore, the ten terms with the highest occurrences in sequence are: (1) *students* (76 with relevance value = 0.89), (2) *disability* (61 with relevance value = 0.34), (3) *individual* (50 with relevance value = 0.65), (4) skill (43 with relevance value = 1.51), (5) *attitude* (39 with relevance value = 0.67), (6) *person* (34 with relevance value = 0.24), (7) *course* (20 with relevance value = 0.14), (8) *training* (19 with relevance value = 0.42), (9) child (12 with relevance value = 4.76), and (10) *evidence* (10 with relevance value = 0.38).

The term *"student"* and the term *"disability"* are most often found in the data corpus and have a network to all terms contained in the visualization. Unfortunately, in the networking visualization, the visualization with a data corpus larger than the title and abstract also reconfirms that the term *"life skills"* in physical education for people with disabilities has not received serious attention from researchers worldwide. The LS program is essential, especially for children with disabilities, because it can help them survive better to "see" and live life (academic and non-academic).

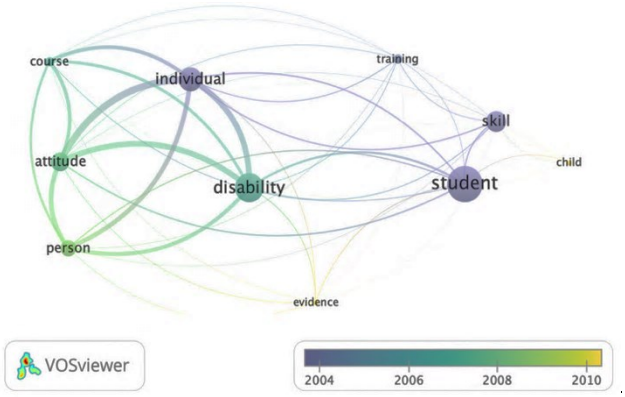

Figure 8. Overlay visualization of title and abstract trends

Discussion

Based on the metric analysis results from the Scopus and PoP databases, as well as visualizations from the VOSviewer application, researchers have informed that studies on LS teaching in physical education for disabilities are very rarely explored. Therefore, future studies can fill this gap so that physical education becomes a strategic medium to facilitate students with disabilities in developing self-identity and a more meaningful life through their chosen movement activities (Kartini & Aprilia, 2021; Mawena & Sorkpor, 2024). Life skills have been established as one of the quality and capacity requirements at every level of education that students need to achieve (Giang et al., 2022), including students with disabilities. The reason is that teaching and designing LS values in physical activities for students with disabilities can prepare and strengthen them in psychological

assets, values, and skills that enable them to effectively deal with the demands and challenges of everyday life while helping them to develop by overcoming various mental disorders and life challenges (Jones & Lavallee, 2009; Kendellen et al., 2017; Sherif et al., 2023).

Mental health problems, including depression and anxiety, are at very high risk for children and adolescents. Physical education is one of the intervention programs designed to improve mental well-being and strengthen their ability to cope with the stress of everyday life (Sherif et al., 2023). Fourteen years earlier, Bouck (2010) released the results of a study that reported low acceptance of physical education teaching/training in schools for students with disabilities (intellectual disabilities). For this reason, Bouck (2010) recommended that teachers improve how they equip students with physical education (e.g., independent living, daily living, finances) to succeed in work and live independently. This means that the values established in sports practices that prioritize performance and athletic ability alone must be minimized immediately because they make students feel that physical education is an unwelcoming place as it neglects their needs and interests (Tanure Alves et al., 2020). On the contrary, physical education should provide meaningful educational experiences to students with disabilities by formulating creative and enjoyable movement instruction to promote life skills (LS), including teamwork, goal setting, time management, emotional skills, interpersonal communication, social skills, leadership, problem-solving, decision-making (Cronin et al., 2020; Cronin & Allen, 2017), critical thinking, creative thinking, collaboration, and communication Razali et al. (2024)

It should be emphasized that physical education uses and creates students' physical experiences to achieve educational goals (Blegur, Lumba, et al., 2023; Blegur, Rajagukguk, et al., 2023), so teachers are responsible for ensuring that their students' physical experiences have high significance for their students' LS (in addition to the physical itself). There are three main rationales for teachers to integrate LS into physical education. First, LS and physical skills are learned through demonstration. Second, many skills learned in sports are transferable to other life domains (including performing under pressure, problem-solving, meeting deadlines and challenges, goal setting, communicating, dealing with success and failure, working in teams, and receiving feedback). Third, sports are pervasive activities throughout our society, and most students are familiar with them (Goudas et al., 2006; Papacharisis et al., 2005). At least these three basic reasons provide various justifications for physical education as a strategic medium for promoting students' LS (Aliberti & Manzo, 2023; Anira et al., 2021; Cronin et al., 2020; Goudas et al., 2006; Goudas & Giannoudis, 2008; Kumar, 2017; Winn et al., 2022).

The success of teaching students with disabilities is also determined by the teacher's strategy in using more instructions, maintaining closer communicative proximity, and fostering higher student engagement in high-level teaching. This approach provides students with more learning opportunities and facilitates feedback, feed-forward, and individual support (Bertills et al., 2019). For instance, during games and sports activities, teachers can optimize instructions, communicate effectively, and give students more learning opportunities, emphasizing the importance of collaboration to create goals rather than just focusing on the goal itself. Teachers can also train students to set objectives in their participation in games and sports beyond just achieving success. Additionally, teachers can ask students to analyze why movement is necessary in sports activities, rather than just focusing on the movements themselves. Students can also take on leadership roles as coaches or referees in sports matches, rather than just being players. This means that during physical and sports activities, they should not only focus on techniques and tactics but also be stimulated by the teacher to develop skills that have the potential to be transferred to real-life situations. Such learning experiences increase the chances of successfully acquiring life skills, as the skills students develop in games and sports at school can be transferred to other contexts, such as home, community, or workplace (Cronin et al., 2023; Williams et al., 2022).

Although physical education is an ideal and strategic arena for promoting LS, of course, teachers have their challenges considering that they are in inclusive classes, so they need to prepare higher and more complex teaching competencies so that they do not experience significant difficulties when integrating them. This problem was confirmed by the results of a Nanayakkara (2022) qualitative study in Sri Lanka. In general, physical education teachers are less confident about the inclusion of students with disabilities in their classes, so the government needs to re-plan and create teacher training in order to facilitate the successful integration of LS of students with disabilities into physical education classes. Early and ongoing education programs for teachers need to target effective pedagogical practices to promote inclusion, leading to the restructuring of physical education teacher training (Alves et al., 2017). This is because their classroom and field experiences in teaching and preparing students with disabilities are inadequate (Lirgg et al., 2017). Therefore, there is a need to improve the delivery of physical education tailored to special needs or requirements. This means the government must ensure that teachers involved in the education of students with disabilities are adaptable and continually learning to meet the learning needs and rights of their students (Lobo et al., 2022).

Based on the results of this study, future researchers should consider various ways to integrate life skills into physical education for students with disabilities. For example, using universal learning design (AlRawi & AlKahtani, 2022; Haegele et al., 2024; Maher & Haegele, 2022) and also differentiated instruction (Blegur & Hardiansyah, 2024; Tomlinson, 2001, 2014). Not only that, physical education teachers can also try out strategies, such as (1) focusing on one life skill per lesson, (2) introducing life skills at the beginning of the lesson, (3) implementing strategies to teach life skills throughout the lesson, and (4) asking

about life skills at the end of the lesson (Kendellen et al., 2017). Four stages of participatory studies with design, planning, implementation, and evaluation of LS courses for students (Knudsen et al., 2020). Integrating students' LS through (1) selecting and discussing LS at each meeting; (2) practicing the selected LS, (3) integrating LS during practice, (4) discussing and reflecting on the application of LS and transfer to other contexts, and (5) creating opportunities to facilitate LS transfer (Ciampolini et al., 2020).

Conclusion

Eighteen Scopus documents published over 51 years are undeniable evidence that the focus and scope of LS research for physical education for disabled people is still minimal. It does not mention the distribution of the number of countries that the United States still dominates, with a gap of 11 documents from the country of Turkey and 13 documents from other countries. Professor Martin E. Block from the University of Virginia is a productive author producing articles on physical education for disabled people. Unfortunately, Block only published three documents in this study that highlighted and discussed the research term on LS. In addition, from the corpus of keywords or titles and abstracts, LS keywords and terms were not found in the networking map. We conclude that teaching LS for physical education in the context of disabilities is highly promising for exploration using a broader range of inspection platforms, as this study was limited to inspection results from the Scopus platform. Besides the intrinsic importance of LS itself, students with disabilities may require more strategic attention, opportunities, and experiences in LS development to help them maintain mental health stability and effectively navigate community life. Physical education must be able to bridge these issues to create meaningful, quality learning experiences for students with disabilities and also free students from various mental health problems and so on.

Acknowledgments

We also thank the Institute for Research and Community Service, Universitas Syiah Kuala and Indonesia Endowment Funds for Education (LPDP) Center for Higher Education Funding (BPPT) for sponsoring the publication of research.

Conflict of Interest

There is no conflict of interest.

References

Aliberti, S., & Manzo, G. (2023). Physical and sport education for life and soft skills development. *Formazione & Insegnamento*, *21*(1), 79–85. https://doi.org/10.7346/-feis-XXI-01-23_12

AlRawi, J. M., & AlKahtani, M. A. (2022). Universal design for learning for educating students with intellectual disabilities: A systematic review. *International Journal of Developmental Disabilities*, *68*(6), 800–808. https://doi.org/10.1080/20473869.2021.1900505

Altundağ, S., & Çalbayram, N. Ç. (2016). Teaching menstrual care skills to intellectually disabled female students. *Journal of Clinical Nursing*, *25*(13–14), 1962–1968. https://doi.org/10.1111/jocn.13215

Alves, M. L. T., Storch, J. A., Harnisch, G., Strapasson, A. M., Furtado, O. L. P. da C., Lieberman, L., de Almeida, J. J. G., & Duarte, E. (2017). A aula de educação física e a inclusão da criança com deficiência: Perspectiva de professores brasileiros. *Movimento*, *23*(4), 1229–1244. https://doi.org/10.22456/1982-8918.66851

Anira, Syarifatunnisa, Ma'mun, A., & Rahayu, N. I. (2021). Integrating life skills through physical activities programs. *Jurnal Pendidikan Jasmani dan Olahraga*, *6*(1), 68–74. https://doi.org/10.17509/jpjo.v6i1.26621

Bentzen, B. L. (1973). Transfer of learning from school setting to life style in a habilitation program for multiply handicapped blind persons. *New Outlook for the Blind*, *67*(7), 297–300. https://www.scopus.com/inward/record.uri?eid=2-s2.0-0015762711&partnerID=40&md5=e589b6ddfbe143a47d082f4f5fc51a92

Bertills, K., Granlund, M., & Augustine, L. (2019). Inclusive teaching skills and student engagement in physical education. *Frontiers in Education*, *4*, 74. https://doi.org/10.3389/feduc.2019.00074

Blegur, J., & Hardiansyah, S. (2024). Differentiation instruction publications in physical education: Bibliometric analysis of the last ten years. *Journal of Education and Learning (EduLearn)*, *18*(3), 902–913. https://doi.org/10.11591/edulearn.v18i3.21307

Blegur, J., Lumba, A. J. F., & Ngongo, M. (2023). Tracing physical education teachers' teaching difficulties in online era using teaching skill indicators. *Pegem Journal of Education and Instruction*, *13*(1), 125–134. https://doi.org/10.47750/pegegog.13.01.15

Blegur, J., Ma'mun, A., Mahendra, A., Mahardika, I. M. S., & Tlonaen, Z. A. (2023). Bibliometric analysis of micro-teaching model research trends in 2013-2023. *Journal of Innovation in Educational and Cultural Research*, *4*(3), 523–533. https://doi.org/10.46843/jiecr.v4i3.782

Blegur, J., Mulyana, F. R., & Saparia, A. (2024). Publication trends of online assessment in physical education. *Journal of Learning for Development*, *11*(2), 349–368. https://doi.org/10.56059/jl4d.v11i1.1227

Blegur, J., Rajagukguk, C. P. M., Sjioen, A. E., & Souisa, M. (2023). Innovation of analytical thinking skills instrument for throwing and catching game activity for elementary school students. *International Journal of Instruction*, *16*(1), 723–740. https://doi.org/10.29333/iji.2023.16140a

Block, M. E. (1992). What is appropriate physical education for students with profound disabilities? *Adapted Physical Activity Quarterly*, *9*(3), 197–213. https://doi.org/10.1123/apaq.9.3.197

Block, M. E., Haegele, J., Kelly, L., & Obrusnikova, I. (2021). Exploring future research in adapted physical education. *Research Quarterly for Exercise and Sport*, *92*(3), 429–442. https://doi.org/10.1080/02701367.2020.1741500

Bouck, E. C. (2010). Reports of life skills training for students with intellectual disabilities in and out of school. *Journal of Intellectual Disability Research*, *54*(12), 1093–1103.

https://doi.org/10.1111/j.1365-2788.2010.01339.x

Ciampolini, V., Milistetd, M., Kramers, S., & do Nascimento, J. V. (2020). What are life skills and how to integrate them within sports in Brazil to promote positive youth development? *Journal of Physical Education (Maringa)*, *31*(1), e3150. https://doi.org/10.4025/jphyseduc.v31i1.3150

Cronin, L. D., & Allen, J. (2017). Development and initial validation of the life skills scale for sport. *Psychology of Sport and Exercise*, *28*, 105–119. https://doi.org/10.1016/j.psychsport.2016.11.001

Cronin, L. D., Greenfield, R., & Maher, A. (2023). A qualitative investigation of teachers' experiences of life skills development in physical education. *Qualitative Research in Sport, Exercise and Health*, *15*(6), 789–804. https://doi.org/10.1080/2159676X.2023.2222774

Cronin, L. D., Marchant, D., Johnson, L., Huntley, E., Kosteli, M. C., Varga, J., & Ellison, P. (2020). Life skills development in physical education: A self-determination theory-based investigation across the school term. *Psychology of Sport and Exercise*, *49*, 101711. https://doi.org/10.1016/j.psychsport.2020.101711

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Gámez-Calvo, L., Gamonales, J. M., Hernández-Beltrán, V., & Muñoz-Jiménez, J. (2024). Bibliometric analysis of studies on attitudes towards disability and inclusion in physical education teachers (Análisis bibliométrico de los estudios sobre actitudes hacia la discapacidad e inclusión en profesores de educación física). *Retos*, *54*, 188–197. https://doi.org/10.47197/retos.v54.102984

Giang, T. T., Khanh, M. Q., Hong, N. T. T., & Hoa, V. Le. (2022). Life skills education capacity structure of teacher in the context of current education innovation. *International Journal of Social Sciences*, *5*(2), 105–109. https://doi.org/10.21744/ijss.v5n2.1893

Goudas, M., Dermitzaki, I., Leondari, A., & Danish, S. (2006). The effectiveness of teaching a life skills program in a physical education context. *European Journal of Psychology of Education*, *21*(4), 429–439. https://doi.org/10.1007/BF03173512

Goudas, M., & Giannoudis, G. (2008). A team-sports-based life-skills program in a physical education context. *Learning and Instruction*, *18*(6), 528–536. https://doi.org/10.1016/j.learninstruc.2007.11.002

Hadiana, O., Subarjah, H., Ma'mun, A., & Mulyana. (2021). Integration of life skills in the Putera Muhammadiyah Kuningan pencak silat training. *JUARA: Jurnal Olahraga*, *6*(2), 264–277. https://doi.org/10.33222/juara.v6i2.1339

Hadiana, O., Subarjah, H., Mamun, A., Mulyana, M., Yuliardi, R., & Nur, L. (2022). Life skill development through pencak silat martial arts training: An intentionally structured positive youth development program. *International Journal of Human Movement and Sports Sciences*, *10*(4), 660–667. https://doi.org/10.13189/saj.2022.100405

Haegele, J. A., Holland, S. K., Wilson, W. J., Maher, A. J., Kirk, T. N., & Mason, A. (2024). Universal design for learning in physical education: Overview and critical reflection. *European Physical Education Review*, *30*(2), 250–264. https://doi.org/10.1177/1356336X231202658

Ivy, V. N., Richards, K. A. R., Lawson, M. A., & Alameda-Lawson, T. (2018). Lessons learned from an after-school program: Building personal and social responsibility. *Journal of Youth Development*, *13*(3), 162–175. https://doi.org/10.5195/jyd.2018.606

Jacobs, J. M., Wright, P. M., & Richards, K. A. R. (2022). Students' perceptions of learning life skills through the teaching personal and social responsibility model: An exploratory study. *Frontiers in Sports and Active Living*, *4*, 898738. https://doi.org/10.3389/fspor.2022.898738

Jan van Eck, N., & Waltman, L. (2023). *VOSviewer manual: Manual for VOSviewer version 1.6.19*. Netherlands: Universiteit Leiden.

Jones, M. I., & Lavallee, D. (2009). Exploring the life skills needs of British adolescent athletes. *Psychology of Sport and Exercise*, *10*(1), 159–167. https://doi.org/10.1016/j.psychsport.2008.06.005

Kartini, A., & Aprilia, D. (2021). Opportunities and challenges: Youth activation program for youth athletes soina in increasing self-esteem. In M. Iswari, Irdamurni, Martiaz, Zulmiyetri, & Rahmatisilvia (Eds.), *International Conference on Special Education In South East Asia Region 11 th Series* (Vol. 8, pp. 1–4). Redwhite Press. https://doi.org/10.32698/ICSAR-11507

Kendellen, K., Camiré, M., Bean, C. N., Forneris, T., & Thompson, J. (2017). Integrating life skills into Golf Canada's youth programs: Insights into a successful research to practice partnership. *Journal of Sport Psychology in Action*, *8*(1), 34–46. https://doi.org/10.1080/21520704.2016.1205699

Knudsen, J. V., Elkrog-Hansen, L. M., & Christiansen, L. B. (2020). Life skills through school sport: A participatory teacher development program. *Advances in Physical Education*, *10*(3), 293–310. https://doi.org/10.4236/ape.2020.103024

Krebs, P. L., & Block, M. E. (1992). Transition of students with disabilities into community recreation: The role of the adapted physical educator. *Adapted Physical Activity Quarterly*, *9*(4), 305–315. https://doi.org/10.1123/apaq.9.4.305

Kumar, S. S. (2017). Developing life skills through physical education. *International Journal of Physical Education, Sports and Health*, *4*(2), 191–192. https://www.kheljournal.com/archives/2017/vol4issue2/PartD/4-2-37-180.pdf

Lee, O., Park, M., Jang, K., & Park, Y. (2017). Life lessons after classes: Investigating the influence of an afterschool sport program on adolescents' life skills development. *International Journal of Qualitative Studies on Health and Well-Being*, *12*(1), 1307060. https://doi.org/10.1080/17482631.2017.1307060

Lirgg, C. D., Gorman, D. R., Merrie, M. D., & Shewmake, C. (2017). Exploring challenges in teaching physical education to students with disabilities. *Palaestra*, *31*(2). https://js.sagamorepub.com/index.php/palaestra/article/view/8428

Lobo, J., Cruz, J. C., Cruz, J., Abella, J., Castro, W., Celis, M. L., & Bernardo, B. D. (2022). Experiences of college students with physical impairment during online classes in physical education. *Edu Sportivo: Indonesian Journal of Physical Education*, *4*(1), 15–28. https://doi.org/10.25299/es:ijope.2023.vol4(1).10789

Maher, A. J., & Haegele, J. A. (2022). Teaching physically disabled students in physical education. In *Teaching Disabled Children in Physical Education* (1st ed., pp. 61–73). London: Routledge. https://doi.org/10.4324/9781003176282-6

Maravé-Vivas, M., Salvador-García, C., Capella Peris, C., & Gil

Gómez, J. (2023). Aprendizaje-servicio y motricidad en la formación inicial docente: Una apuesta educativa inclusiva. *Apunts Educación Física y Deportes*, *151*, 82–89. https://doi.org/10.5672/apunts.2014-0983.es.(2023/2).152.09

Marmoah, S., Gestiardi, R., Sarwanto, S., Chumdari, C., & Maryani, I. (2022). A bibliometric analysis of collaboration skills in education (2019-2021). *Journal of Education and Learning (EduLearn)*, *16*(4), 542–551. https://doi.org/10.11591/edulearn.v16i4.20337

Mawena, J., & Sorkpor, R. S. (2024). Enhancing inclusive physical activity for students with disabilities: Patterns and opportunities. *Aquademia*, *8*(1), ep24002. https://doi.org/10.29333/aquademia/14430

McNamara, S., Brian, A., Patey, M., & Bittner, M. (2024). Content acquisition podcasts vs open-access podcast: Improving preservice physical educators' ability to teach students with visual impairments. *Journal of Special Education Technology*, *39*(1), 134–142. https://doi.org/10.1177/01626434231184820

Mejia, C., Wu, M., Zhang, Y., & Kajikawa, Y. (2021). Exploring topics in bibliometric research through citation networks and semantic analysis. *Frontiers in Research Metrics and Analytics*, *6*, 742311. https://doi.org/10.3389/frma.2021.742311

Nagler, W. (1973). Participation in medical undergraduate training by the department of rehabilitation medicine. *Perspectives in Biology and Medicine*, *16*(3), 457–460. https://doi.org/10.1353/pbm.1973.0012

Nanayakkara, S. (2022). Teaching inclusive physical education for students with disabilities: Reinvigorating in-service teacher education in Sri Lanka. *Sport, Education and Society*, *27*(2), 210–223. https://doi.org/10.1080/13573322.2021.1964462

Nugraha, E., Hidayat, Y., Sumpena, A., Salman, & Wibowo, R. (2022). Integrating life skills into kid's athletics program on extracurricular activities. *International Journal of Human Movement and Sports Sciences*, *10*(5), 932–938. https://doi.org/10.13189/saj.2022.100509

Ocete Calvo, C., Pérez Tejero, J., & Coterón López, J. (2015). Propuesta de un programa de intervención educativa para facilitar la inclusión de alumnos con discapacidad en educación física (Propose of an educative intervention program for inclusion of children with disability in general physical education). *Retos*, *27*, 140–145. https://doi.org/10.47197/retos.v0i27.34366

Papacharisis, V., Goudas, M., Danish, S. J., & Theodorakis, Y. (2005). The effectiveness of teaching a life skills program in a sport context. *Journal of Applied Sport Psychology*, *17*(3), 247–254. https://doi.org/10.1080/10413200591010139

Pekmezaris, R., Patel, V., Herman, P., Stein, A. B., & Bloom, O. (2023). Experiences and recommendations from people with spinal cord injury following participation in a disability education session at an allopathic medical school: A qualitative study. *Spinal Cord Series and Cases*, *9*(1), 28. https://doi.org/10.1038/s41394-023-00582-6

Peris, C. C., Gómez, J. G., & Puig, M. M. (2014). Service-learning methodology in physical education (La metodología del aprendizaje-servicio en la educación física). *Apunts. Educacion Fisica y Deportes*, *116*(1), 33–43. https://doi.org/10.5672/apunts.2014-0983.es.(2014/2).116.03

Rachman, H. A. (2009). Dimensi kecakapan hidup (life skills) dalam pembelajaran pendidikan jasmani. *Jurnal Pendidikan Jasmani Indonesia*, *6*(2), 19–26. https://doi.org/10.21831/jpji.v6i2.437

Razali, Blegur, J., Ma'mun, A., Berliana, Mahendra, A., Juliantine, T., Lubis, A. E., Prasetiyo, R., & Tlonaen, Z. A. (2024). Physical education teachers' experiences in promoting life skills using differentiated instruction. *Retos*, *57*, 641–654. https://doi.org/10.47197/retos.v57.106167

Reina, R., Hutzler, Y., Iniguez-Santiago, M. C., & Moreno-Murcia, J. A. (2016). Attitudes towards inclusion of students with disabilities in physical education questionnaire (AISDPE): A two-component scale in Spanish. *European Journal of Human Movement*, *36*, 75–87. https://www.eurjhm.com/index.php/eurjhm/article/view/368

Salih, F. A., & Al-Kandari, H. Y. (2007). Effect of a disability course on prospective educators' attitudes toward individuals with mental retardation. *Digest of Middle East Studies*, *16*(1), 12–29. https://doi.org/10.1111/j.1949-3606.2007.tb00062.x

Sherif, Y., Azman, A. Z. F., Awang, H., Mokhtar, S. A., Mohammadzadeh, M., & Alimuddin, A. S. (2023). Effectiveness of life skills intervention on depression, anxiety and stress among children and adolescents: A systematic review. *Malaysian Journal of Medical Sciences*, *30*(3), 42–59. https://doi.org/10.21315/mjms2023.30.3.4

Sonjaya, A. R., Pratama, K. W., Ali, S. K. S., Hardianto, D., Kauki, M. K., Sutapa, P., Ma'mun, A., Kusmaedi, N., Juliantine, T., & Fauzi, M. L. (2024). Integration of life skills through aquatic activities in the context of positive youth development (pyd). *Retos*, *53*, 598–607. https://doi.org/10.47197/retos.v53.102506

Suardika, I. K., Ma'mun, A., Kusmaedi, N., & Budiana, D. (2021). Development of life skills through physical education and sports. *Advances in Social Science, Education and Humanities Research*, *618*, 367–371. https://doi.org/10.2991/assehr.k.211223.063

Tanure Alves, M. L., Grenier, M., Haegele, J. A., & Duarte, E. (2020). 'I didn't do anything, I just watched': perspectives of Brazilian students with physical disabilities toward physical education. *International Journal of Inclusive Education*, *24*(10), 1129–1142. https://doi.org/10.1080/13603116.2018.1511760

Taylor, E., & Manguno, J. (1991). Use of treatment activities in occupational therapy. *The American Journal of Occupational Therapy: Official Publication of the American Occupational Therapy Association*, *45*(4), 317–322. https://doi.org/10.5014/ajot.45.4.317

Tomlinson, C. A. (2001). *How to differentiated instruction in mixed-ability classrooms* (2nd ed.). Virginia: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners* (2nd ed.). Virginia: Association for Supervision and Curriculum Development.

Wallace, C. J. (1993). Psychiatric rehabilitation. *Psychopharmacology Bulletin*, *29*(4), 537–548. https://psycnet.apa.org/record/1994-46700-001

Warren, S. A., & Taylor, R. L. (1984). Education of children with learning problems. *Pediatric Clinics of North America*, *31*(2), 331–343. https://doi.org/10.1016/S0031-3955(16)34571-0

Williams, C., Neil, R., Cropley, B., Woodman, T., & Roberts, R. (2022). A systematic review of sport-based life skills

programs for young people: The quality of design and evaluation methods. *Journal of Applied Sport Psychology*, *34*(2), 409–435. https://doi.org/10.1080/10413200.2020.1792583

Winn, S., Grenier, M., & Newman, T. (2022). Utilizing the framework of life skills development to promote social–emotional learning in elementary physical education. *Journal of Physical Education, Recreation & Dance*, *93*(6), 42–50. https://doi.org/10.1080/07303084.2022.2081269

Datos de los/as autores/as y traductor/a:

Razali	razali.ismail@usk.ac.id	Autor/a
Mansur	mansur_fsd@usk.ac.id	Autor/a
Jusuf Blegur	jusufblegur@ukaw.ac.id	Autor/a
Berliana	berliana@upi.edu	Autor/a
Muhamad Ilham	milham@unj.ac.id	Autor/a
Muhammad Nur Alif	mnalif@upi.edu	Autor/a
Iis Sintiani	iissintiani99@upi.edu	Autor/a
Mieke Souisa	mieke.souisa@fkip.unpatti.ac.id	Autor/a
Ade Evriansyah Lubis	lubisadee@gmail.com	Autor/a
Zuvyati Aryani Tlonaen	zuvyatitlonaen@ukaw.ac.id	Traductor/a