OPEN ACCESS
Scholars Bulletin
Abbreviated Key Title: Sch Bull
ISSN 2412-9771 (Print) |ISSN 2412-897X (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Subject Category: Education

Review of Student Engagement and Academic Performance in Online Education Using VOSviewer

Zertaj Fatima[1*], Zeba Quamer[2]

[1]Program Coordinator, Applied College, Jazan University, Jazan 45142, Saudi Arabia; Email: zahmad@jazanu.edu.sa
[2]Language Instructor, Eli (English Language Institute), Jazan University, Jazan 45142, Saudi Arabia: Email: zquamer@jazanu.edu.sa

DOI: 10.36348/sb.2023.v09i09.001 | **Received:** 06.09.2023 | **Accepted:** 14.10.2023 | **Published:** 21.10.2023

***Corresponding author:** Zertaj Fatima
Program Coordinator, Applied College, Jazan University, KSA

Abstract

The current study intends to objectively assess the English-language publications from the Google Scholar database in relation to student involvement and academic performance over the time period from early 2013 to 2023. The research uses a bibliometric approach and the program VOSviewer to describe the composition and evolution of the field. When searching the Google scholar database for the terms student involvement and academic success, thousands of documents come up. 50 papers were eventually found by the search engine. Aim of the current study is to visualize the relationship between student engagement and academic performance in online education using VOSviewer software.

Keyword: Student engagement, academic performance& online education and VOSviewer.

INTRODUCTION

According to all of the literature, student engagement is the level of enthusiasm, drive, or curiosity that students show for their studies [1]. It is a complicated concept that includes a number of elements [2]. From a classic didactic paradigm to a contemporary co-created collaborative one, the frameworks for student participation have developed. The current frameworks have acknowledged gaps, nevertheless [3]. A framework of learning stewardship is suggested to fill up these gaps by John 2022 [4]. Additionally, elements including students' sense of agency, connectivity, self-efficacy, and achievement orientation have an impact on student engagement [5].

Student Engagement

The conventional didactic style of student involvement has given way to a contemporary co-creative collaborative model that is student focused [6]. Engagement can be shaped by teachers' activities. Numerous good outcomes are enhanced by student participation [7]. The idea of students participating in the teaching and learning process is crucial [8]. For credible educational institutions and the promotion of good learner-instructor relationships, student involvement is crucial [9]. The idea of students participating in the teaching and learning process is crucial. Pupils who were female engaged substantially more than pupils who were male [10]. In order to keep students in school, the focus on student engagement has traditionally been on raising attainment, encouraging positive behaviors, and creating a feeling of community [11]. The assumption is that engagement is changeable, receptive to contextual cues, and susceptible to environmental factors [12].

Academic Performance

Performance refers to how well a task is completed [13]. Academic success in academia was heavily influenced by individual variations, the organizational environment, culture, and technical infrastructure [14]. Academic success is the extent to which the goals outlined in the academic curriculum are met [15]. The interaction of many different elements affects academic success, which is a complex process [16].

Academic success serves as a gauge of a student's aptitude [17]. Learning new concepts and having the ability to work quickly are key components of academic success.[18] In the teaching-learning process,

academic performance is a fundamental, complex, and multidimensional entity [19]. The faculty's performance in terms of professionalism, dedication, topic knowledge, teaching for independent learning, and learning management was extremely satisfactory [20]. To determine whether academic departments accomplish their set goals, performance measures must be used [21].

Online Learning

The newest and most widely used type of distance learning nowadays is online [22]. Online learning is the practice of receiving instruction electronically via a variety of multimedia and Internet-based platforms and tools [23]. More people use Edmodo and Google Classroom as online teaching and learning resources [24]. The definition of teaching and learning is renegotiated in online learning [25]. The discovery learning methodology is ideally suited for application [26], online education is a fresh approach to contemporary distance learning [27]. Online learning is defined in terms of participant interaction, flexibility, and availability to learning opportunities [28]. Online education can encourage changes in teaching methods, teaching philosophy, and teaching quality [29].

The Relationship between Student Engagement and Academic Performance

Significantly predicting reading success were behavioral involvement and emotional engagement [30]. Students' participation in school activities plays a significant role on how well they do academically [31]. Better academic achievement can be attained with more academic devotion [32]. Increased student engagement improves learning and future performance in the module [33]. Academic success is significantly predicted by student engagement [34]. Academic achievement was predicted and 10% of it was explained by cognitive, behavioral, and emotional involvement [35]. More so than classmates, pupils with the lowest abilities gain from interaction [36]. Performance in school is predicted by cognitive engagement [37].

METHODOLOGY

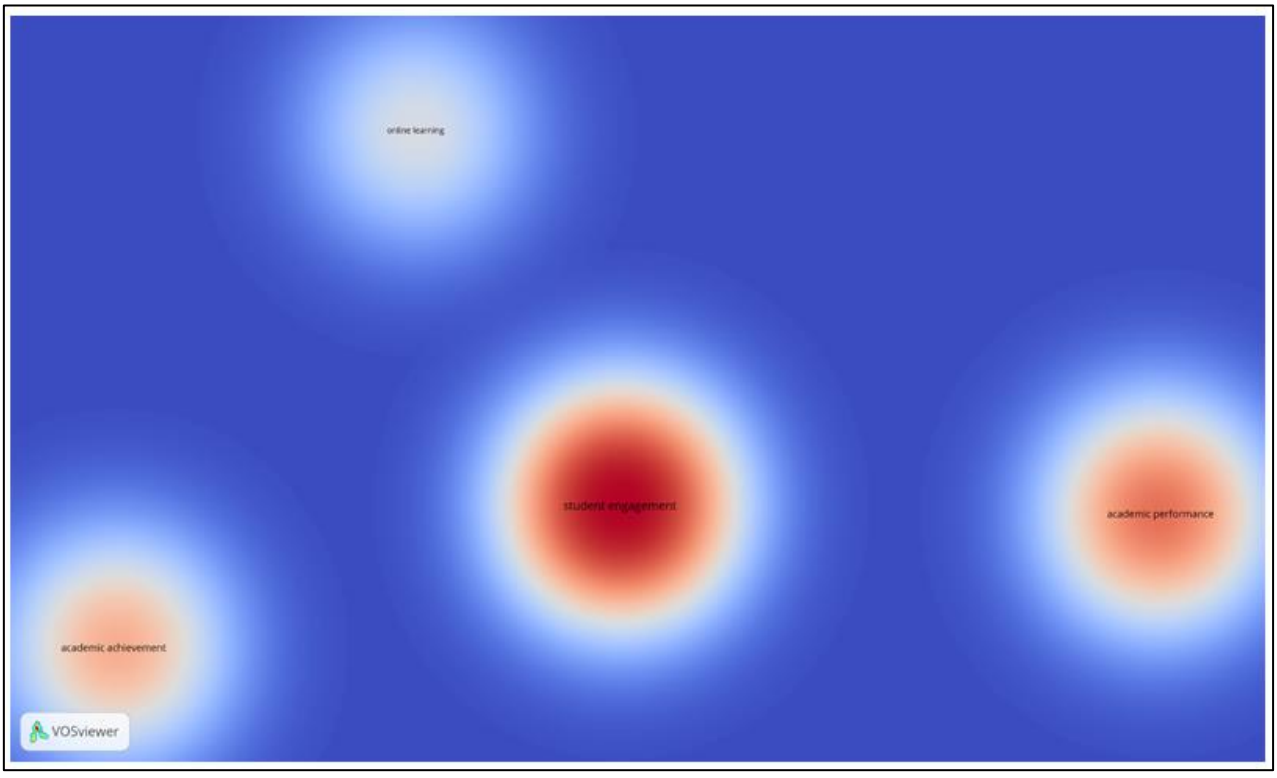
Research Objective

To search research papers with keywords from literature database using google scholar in publish & perish database [38]. To find the citation metrics of the paper in publish & perish software [39]. To find word co-occurrence and co-author using full and binary counting using VOSviewer software [40].

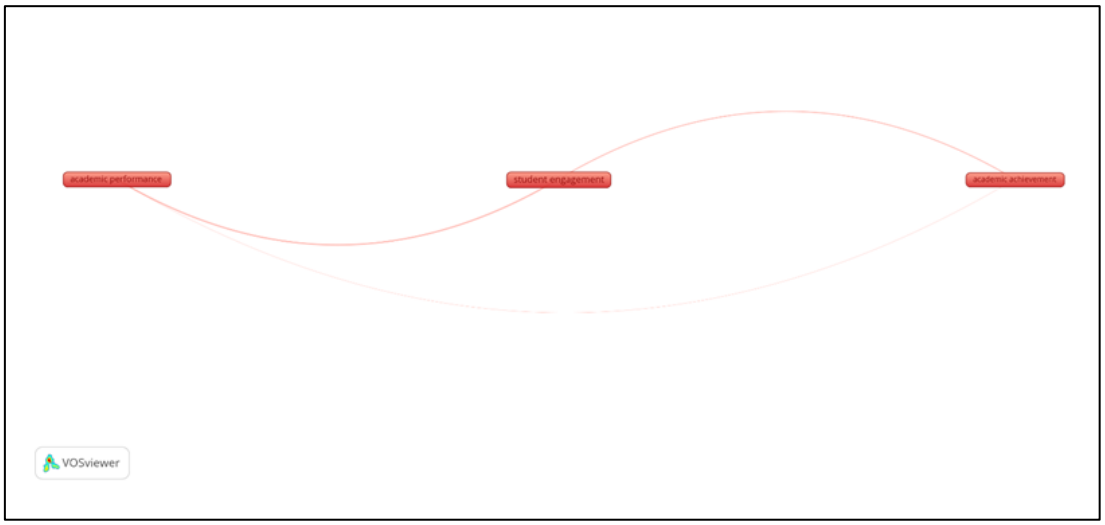
Co-occurrence map based on text data

Fields are extracted from title and abstract in full counting and binary counting [41].

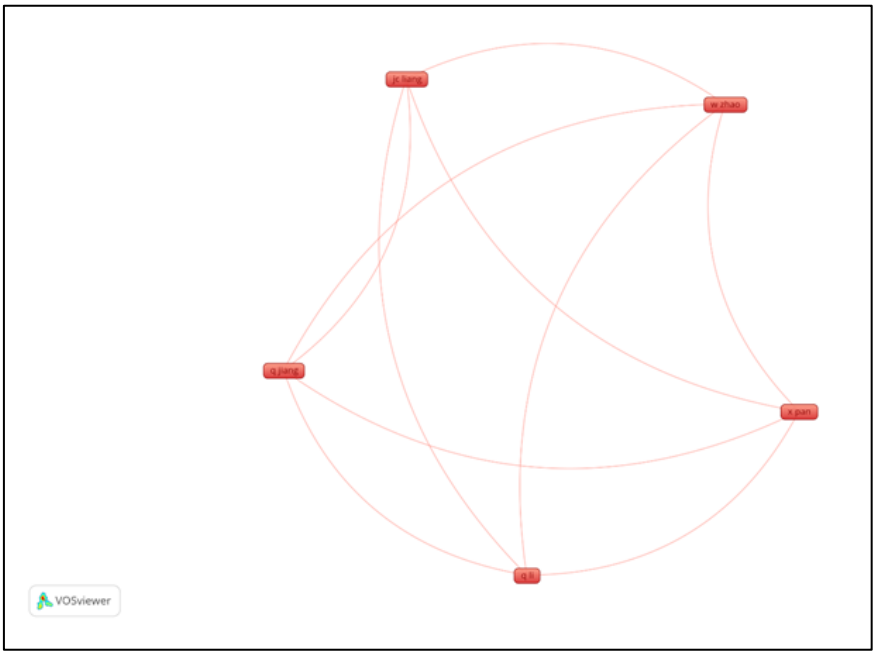
Full counting



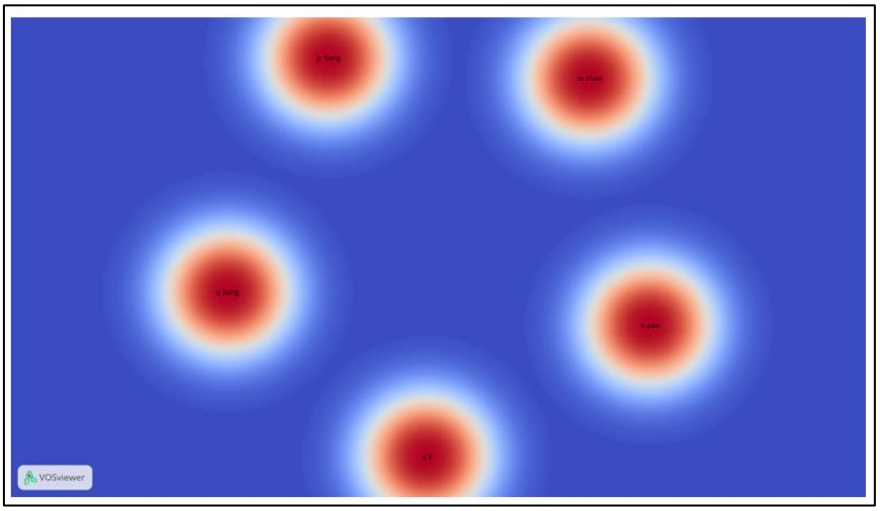
Binary counting

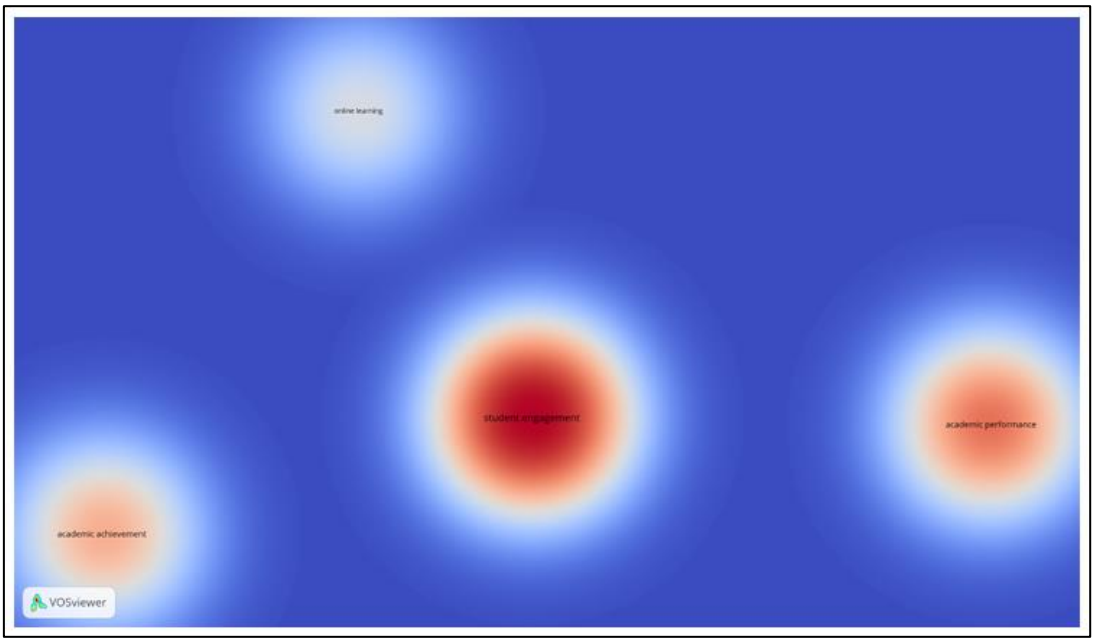


Co authorship full counting



Co authorship binary counting





Citation metrics	Help
Publication years:	2006-2023
Citation years:	17 (2006-2023)
Papers:	50
Citations:	12551
Cites/year:	738.29
Cites/paper:	251.02
Cites/author:	6874.95
Papers/author:	28.70
Authors/paper:	2.24
h-index:	32
g-index:	50
hI,norm:	25
hI,annual:	1.47
hA-index:	20
Papers with ACC >= 1,2,5,10,20:	49 48 38 29 19

Source: Citation metrics from publish or perish software

CONCLUSION & DISCUSSION

Due to the limitation of access to scopus and web of science database further research can't be performed in biblioshiny software [42]. Both for individual modules and across the cohort, student performance was positively connected with their level of participation [43]. Student involvement is positively correlated with motivation to study and self-efficacy [44]. Students are more satisfied and achieve higher order learning outcomes when teachers are more present and use the teaching technology resources that are accessible [45]. Certain forms of involvement may be benefited by online learning [46].

In terms of group learning and teacher engagement, online learning is still far behind traditional formats [47]. It is shown that the impact of online learning quality aspects on students' pleasure and engagement [48]. The ability to interest students is crucial for their learning, retention, perseverance, and fulfillment [49]. An essential component of student learning and academic performance in the classroom is self-regulated learning [50]. Engagement is seen to be pliable, responsive to contextual cues, and adaptable to changes in the environment [51]. The benefits of blended learning should not be directly attributed to the media [52]. Anyone interested in the practice, policy, and promise of higher education must read the book [53].

Students' college experiences are influenced by academic programs, instructors, and other factors [54]. In the face of challenges and unpleasant experiences, coping activity is either launched, how much effort is put out, and for how long is determined by expectations of personal efficacy [55]. The creation of a complex, situational kind of knowledge is required for the thoughtful pedagogical use of technology [56]. The self-efficacy mechanism could have a wide range of importance to hear from the "virtual generation" of today [57]. This study looks into the connection between academic success and student involvement in online learning environments [58]. It focuses on how students' academic performance is affected by their motivation, engagement, and academic success [59]. According to the study, there is a strong correlation between academic success and the degree of e-learning involvement [60]. The study also looked at the characteristics of student involvement in online courses and the effects of high touch tactics on academic performance [61]. The results imply that improving online learning engagement may have an impact on academic success [62]. The study also discovered that loneliness lowers learning engagement, which affects academic accomplishment [63]. According to the study, giving students access to proper teaching-learning facilities can help them perform better in class [64].

REFERENCES

1. Abla, C., & Fraumeni, B. R. (2019). Student Engagement: Evidence-Based Strategies to Boost Academic and Social-Emotional Results. *McREL International*.
2. Murphy, G. L. (1988). Comprehending complex concepts. *Cognitive science*, *12*(4), 529-562.
3. Taylor, C. A., & Bovill, C. (2018). Towards an ecology of participation: Process philosophy and co-creation of higher education curricula. *European Educational Research Journal*, *17*(1), 112-128.
4. Green, C., Carey, G., & Malbon, E. (2022). Market shaping: Understanding the role of non-government actors in social care quasi-market stewardship. *Social Policy & Administration*, *56*(7), 1138-1155.
5. Alhadabi, A., & Karpinski, A. C. (2020). Grit, self-efficacy, achievement orientation goals, and academic performance in University students. *International Journal of Adolescence and Youth*, *25*(1), 519-535.
6. Huddy, A. (2017). Digital technology in the tertiary dance technique studio: expanding student engagement through collaborative and co-creative experiences. *Research in Dance Education*, *18*(2), 174-189.
7. Tinto, V. (1997). Classrooms as communities: Exploring the educational character of student persistence. *The Journal of higher education*, *68*(6), 599-623.
8. Kaddoura, M. (2013). Think pair share: A teaching learning strategy to enhance students' critical thinking. *Educational Research Quarterly*, *36*(4), 3-24.
9. Luo, N., Zhang, Y., & Zhang, M. (2019). Retaining learners by establishing harmonious relationships in e-learning environment. *Interactive Learning Environments*, *27*(1), 118-131.
10. Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, *45*(5), 369-386.
11. Parsons, J., & Taylor, L. (2011). Improving student engagement. *Current issues in education*, *14*(1).
12. Johns, G. (2018). Advances in the treatment of context in organizational research. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*, 21-46.
13. Mumford, M. D., Baughman, W. A., Threlfall, K. V., Uhlman, C. E., & Costanza, D. P. (1993). Personality, adaptability, and performance: Performance on well-defined problem solving tasks. *Human Performance*, *6*(3), 241-285.
14. Hurtado, S., Alvarez, C. L., Guillermo-Wann, C., Cuellar, M., & Arellano, L. (2012). A model for diverse learning environments: The scholarship on creating and assessing conditions for student success. *Higher Education: Handbook of Theory and Research: Volume 27*, 41-122.
15. Johnson, J. L., & Romanoff, S. J. (1999). Higher education residential learning communities: What are the implications for student success?. *College Student Journal*, *33*(3).
16. Meier, K. J., & O'Toole Jr, L. J. (2003). Public management and educational performance: The impact of managerial networking. *Public administration review*, *63*(6), 689-699.
17. Harackiewicz, J. M., Barron, K. E., Tauer, J. M., & Elliot, A. J. (2002). Predicting success in college: A longitudinal study of achievement goals and ability measures as predictors of interest and performance from freshman year through graduation. *Journal of educational psychology*, *94*(3), 562.
18. Zimmerman, B. J. (2013). Theories of self-regulated learning and academic achievement: An overview and analysis. *Self-regulated learning and academic achievement*, 1-36.
19. Piedade, M. B., & Santos, M. Y. (2010, June). Business intelligence in higher education: Enhancing the teaching-learning process with a SRM system. In *5th Iberian conference on information systems and technologies* (pp. 1-5). IEEE.
20. Guraya, S. Y., & Chen, S. (2019). The impact and effectiveness of faculty development program in fostering the faculty's knowledge, skills, and professional competence: A systematic review and meta-analysis. *Saudi journal of biological sciences*, *26*(4), 688-697.

21. Alferjany, A. A. M., Salama, A. A., Amuna, Y. M. A., Al Shobaki, M. J., & Naser, S. S. A. (2018). The relationship between correcting deviations in measuring performance and achieving the objectives of control-the Islamic University as a model. *International Journal of Engineering and Information Systems (IJEAIS)*, *2*(1), 74-89.
22. Kaplan, A. M., & Haenlein, M. (2016). Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster. *Business horizons*, *59*(4), 441-450.
23. Maddison, T., Doi, C., Lucky, S., & Kumaran, M. (2017). Literature review of online learning in academic libraries. *Distributed learning*, 13-46.
24. Balasubramanian, K., Jaykumar, V., & Fukey, L. N. (2014). A study on "Student preference towards the use of Edmodo as a learning platform to create responsible learning environment". *Procedia-Social and Behavioral Sciences*, *144*, 416-422.
25. Anderson, T. (2004). Teaching in an online learning context. *Theory and practice of online learning*, *273*.
26. Rik, M. I. N. (2003). Simulation and discovery learning in an age of zapping and searching: Learning models. *Turkish Online Journal of Distance Education*, *4*(2).
27. Akilli, G. K. (2007). Games and simulations: A new approach in education. In *Games and simulations in online learning: Research and development frameworks* (pp. 1-20). IGI Global.
28. Curtis, D. D., & Lawson, M. J. (2001). Exploring collaborative online learning. *Journal of Asynchronous learning networks*, *5*(1), 21-34.
29. Duraku, Z. H., & Hoxha, L. (2020). The impact of COVID-19 on education and on the well-being of teachers, parents, and students: Challenges related to remote (online) learning and opportunities for advancing the quality of education. *Manuscript submitted for publication]. Faculty of Philosophy, University of Prishtina*.
30. Lee, J. S. (2014). The relationship between student engagement and academic performance: Is it a myth or reality?. *The Journal of Educational Research*, *107*(3), 177-185.
31. Adeyemo, S. A. (2010). The relationship between students' participation in school based extracurricular activities and their achievement in physics. *International Journal of Science and Technology Education Research*, *1*(6), 111-117.
32. Alalwan, N., Al-Rahmi, W. M., Alfarraj, O., Alzahrani, A., Yahaya, N., & Al-Rahmi, A. M. (2019). Integrated three theories to develop a model of factors affecting students' academic performance in higher education. *Ieee Access*, *7*, 98725-98742.
33. Holmes, N. (2015). Student perceptions of their learning and engagement in response to the use of a continuous e-assessment in an undergraduate module. *Assessment & Evaluation in Higher Education*, *40*(1), 1-14.
34. Gerber, C., Mans-Kemp, N., & Schlechter, A. (2013). Investigating the moderating effect of student engagement on academic performance. *Acta Academica*, *45*(4), 256-274.
35. Gunuc, S. (2014). The relationships between student engagement and their academic achievement. *International Journal on New Trends in Education and their implications*, *5*(4), 216-231.
36. Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in higher education*, *47*, 1-32.
37. Greene, B. A., Miller, R. B., Crowson, H. M., Duke, B. L., & Akey, K. L. (2004). Predicting high school students' cognitive engagement and achievement: Contributions of classroom perceptions and motivation. *Contemporary educational psychology*, *29*(4), 462-482.
38. Nandiyanto, A. B. D., & Al Husaeni, D. F. (2022). Bibliometric analysis of engineering research using VOSviewer indexed by google scholar. *Journal of Engineering Science and Technology*, *17*(2), 883-894.
39. Baneyx, A. (2008). "Publish or Perish" as citation metrics used to analyze scientific output in the humanities: International case studies in economics, geography, social sciences, philosophy, and history. *Archivum immunologiae et therapiae experimentalis*, *56*, 363-371.
40. Afandi, A., Ningsih, K., Hufiah, A., Rosyadi, A. R., & Cornelia, C. (2022, December). Digital-age literacy in Indonesia: A systematic literature review using VOSviewer. In *AIP Conference Proceedings* (Vol. 2600, No. 1). AIP Publishing.
41. Yaâ, A., & Saad, N. (2021). Bibliometric analysis of published literature on taxation in Malaysia, based on scopus database. *Journal of Business Management and Accounting*, *11*(1), 59-86.
42. Pham-Duc, B., Tran, T., Huu Hoang, D., & Bao Do, C. (2023). Global scientific literature on human resource development: a bibliometric analysis using Scopus database. *European Journal of Training and Development*, *47*(7/8), 846-861.
43. Rajabalee, Y. B., & Santally, M. I. (2021). Learner satisfaction, engagement and performances in an online module: Implications for institutional e-learning policy. *Education and Information Technologies*, *26*(3), 2623-2656.
44. Fan, W., & Williams, C. M. (2010). The effects of parental involvement on students' academic self-efficacy, engagement and intrinsic motivation. *Educational psychology*, *30*(1), 53-74.
45. Biggs, J. (1999). What the student does: Teaching for enhanced learning. *Higher education research & development*, *18*(1), 57-75.
46. Gherheș, V., Stoian, C. E., Fărcașiu, M. A., & Stanici, M. (2021). E-learning vs. face-to-face learning: Analyzing students' preferences and behaviors. *Sustainability*, *13*(8), 4381.

47. Serdyukov, P. (2015). Does online education need a special pedagogy?. *Journal of computing and information technology*, *23*(1), 61-74.
48. Ferrer, J., Ringer, A., Saville, K., A Parris, M., & Kashi, K. (2020). Students' motivation and engagement in higher education: The importance of attitude to online learning. *Higher Education*, 1-22.
49. Rovai, A. P. (2003). In search of higher persistence rates in distance education online programs. *The internet and higher education*, *6*(1), 1-16.
50. Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of educational psychology*, *82*(1), 33.
51. Waugh, C. E., Thompson, R. J., & Gotlib, I. H. (2011). Flexible emotional responsiveness in trait resilience. *Emotion*, *11*(5), 1059.
52. Cabendario, E. M., Gleyo, S. M., Piolo, M., & Muico, E. J. G. (2023). Social Media as a Supplemental Tool in Blended Learning. *Journal of Media, Culture and Communication (JMCC) ISSN: 2799-1245*, *3*(01), 7-13.
53. Burgstahler, S. E., & Cory, R. C. (Eds.). (2010). *Universal design in higher education: From principles to practice*. Harvard Education Press.
54. Endo, J. J., & Harpel, R. L. (1982). The effect of student-faculty interaction on students' educational outcomes. *Research in higher education*, *16*, 115-138.
55. Weinberg, R., Gould, D., & Jackson, A. (1979). Expectations and performance: An empirical test of Bandura's self-efficacy theory. *Journal of Sport and Exercise Psychology*, *1*(4), 320-331.
56. Van Manen, M. (2008). Pedagogical sensitivity and teachers practical knowing-in-action. *Peking university education review*, *1*(1), 1-23.
57. Webster, J., & Hackley, P. (1997). Teaching effectiveness in technology-mediated distance learning. *Academy of management journal*, *40*(6), 1282-1309.
58. Sutarni, N., Ramdhany, M. A., Hufad, A., & Kurniawan, E. (2021). Self-regulated learning and digital learning environment: Its' effect on academic achievement during the pandemic. *Cakrawala Pendidikan*, *40*(2), 374-388.
59. Wang, M. T., & Holcombe, R. (2010). Adolescents' perceptions of school environment, engagement, and academic achievement in middle school. *American educational research journal*, *47*(3), 633-662.
60. Torun, E. D. (2020). Online distance learning in higher education: E-learning readiness as a predictor of academic achievement. *Open Praxis*, *12*(2), 191-208.
61. Akkoyunlu, B., & Soylu, M. Y. (2008). A study of student's perceptions in a blended learning environment based on different learning styles. *Journal of Educational Technology & Society*, *11*(1), 183-193.
62. Schaeffer, C. E., & Konetes, G. D. (2010). Impact of learner engagement on attrition rates and student success in online learning. *International Journal of Instructional Technology & Distance Learning*, *7*(5), 3-9.
63. Stoliker, B. E., & Lafreniere, K. D. (2015). The influence of perceived stress, loneliness, and learning burnout on university students' educational experience. *College student journal*, *49*(1), 146-160.
64. Serbessa, D. D. (2006). Tension between traditional and modern teaching-learning approaches in Ethiopian primary schools. *Journal of International cooperation in education*, *9*(1), 123-140.