

PalArch's Journal of Archaeology  
of Egypt / Egyptology

**THE EFFECT OF BLENDED EDUCATION ON ACCORDING  
TO THE MOODLE AND GOOGLE MEET PROGRAM ON  
THE STUDENT'S ACADEMIC SELF-CONCEPT,  
BEHAVIORAL PROBLEMS AND EXECUTIVE FUNCTIONS  
IN SELECTED PRIVATE UNIVERSITIES IN KURDISTAN**

**Lajan Perbal Mahmood**

MA in teaching methods of Arabic language

Lebanese French University

Lajan.perbal@lfu.edu.krd

**Lajan Perbal Mahmood, The effect of blended education on according to the Moodle and Google Meet program on the student's academic self-concept, behavioral problems and executive functions in selected private universities in Kurdistan-Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(12), ISSN 1567-214x**

**Abstract**

The current study aimed to investigate the influence of of blended education on according to the Moodle and Google Meet program on the student's academic self-concept, behavioral problems and executive functions in selected private universities in Kurdistan. The author collected data for this research by handling out surveys as primary research method. The author distrusted 200 surveys in a hard copy format; however, 137 questionnaires were received and being completed properly accordingly the sample of the current research = 137 respondents. The result of research hypothesis, blended learning has significantly predicted academic self-concept (the value Beta = .729,  $p < .001$ , therefore the researcher came to conclude that blended learning has significant relationship academic self-concept.

Keywords: Blended learning, Academic self-concept, Private universities, Erbil

**Introduction**

Kumi–Yeboah, et al. (2018) demonstrated that the utilization of blended learning positively affects diminishing dropout rates and in improving test marks. Additionally, the understudies' impression of blended learning are interrelated with their last checks relying upon the blended learning exercises and on the understudies' age, foundation and class attendance rate. Crossley, et al. (2020), found that the blended learning model offered more to the understudies' science accomplishment than customary instructing strategies and that the understudies' mentalities towards the Internet grew factually fundamentally. showed that blended learning

boosted considerably students' academic self-concept. This outcome clarified that blended learning presented understudies to limitless collaboration with a language client, utilizing a feeling of hearing, seeing and cooperating. Likewise, the trial bunches were more keen on learning oral abilities and that prompts improving their presentation. Simonsmeier, et al. (2020) found that up close and personal courses handily mixed with internet learning advances and techniques for the most part are appraised by understudies as critical enhancements over customary eye to eye classes however that the speed of this change relies on various social elements. Vanslambrouck, et al. (2019) examined the impact of a mixed e-learning climate on understudies' accomplishment and mentalities toward utilizing e-learning at the college level. Results demonstrated unimportant contrast between the instructional medicines in addition scores of the accomplishment test. Nonetheless, the outcomes in the perspectives scale indicated a critical contrast in addition scores for mixed e-learning approach. Baragash& Al-Samarraie, (2018), demonstrated that there were viable advantages to investigating the utilization of blended learning in clinical instruction among medical care understudies. They discovered blended learning can possibly improve the advancement of a scope of clinical skills among medical care understudies. Recognizable proof of procedures to improve understudy scholastic accomplishment has kept on being a noticeable concern globally over the previous many years. Exploration uncovers that understudies typically stress over their scholarly accomplishment and instructive future, and nervousness comes from issues in learning and school requests, which incorporate time the executives for study, dread of disappointment in assessments, and horrible scores (Kintu, et al. 2017). In light of the need to accomplish scholastic greatness, the motivation behind this examination was to explore the connections between scholarly Self-concept and learning procedures, and their predictions concerning scholastic accomplishment. There is adequate worldwide exploration proof that understudies' scholastic accomplishment is emphatically influenced by their high Self-concept and viable learning systems. These positive components are significant variables that improve compelling getting the hang of, encouraging the acknowledgment of full human potential (Nortvig, et al. 2018).

### **Blended Learning**

Advanced education that depends on blended learning consolidates both the customary and present day innovation in training (Cocquyt, et al. 2019). Blended learning has different points of interest including exertion and efficient just as cost viability. Moreover blended learning permits the likelihood to improve understudies' accomplishment level, and assists instructors with establishing a climate that is generally appealing to students (Broadbent & Fuller-Tyszkiewicz, 2018). In spite of apparent importance and apparently suitable fundamental results, blended learning approach is still underutilized because of an assortment of troubles and difficulties. In this manner, it is significant, to give important future vision on how best to present blended learning in the instructing learning measure (Wichadee, 2017). Hui, et al. (2019) underlined on the advantages created

by blended learning for understudies, employees, and overseers. The aftereffects of Najafi, (2019) study indicated that blended learning permits adaptable time plans, improves learning results, empower students assume liability on their own learning, permit students to utilize present day innovation, makes open door for instructor understudy association, increment understudy inclusion in learning, change instructive climate into one more versatile, and open for advancement and consistent improvement. Besides, blended learning makes new occasion to improve notoriety of advanced education establishments and reduced down working expenses (Hipol, et al. 2020). Blended learning is alluded to as a cycle by which educators utilize the Internet and study hall techniques to give understudies a bunch of aptitudes (Auster, 2016); and it characterized as the discovering that joins the qualities of both customary homeroom instructing and web based learning in a coordinated model that utilizes advances accessible for the two methods of learning (Ellis, et al. 2016). Notwithstanding, Montgomery, et al. (2019) saw blended learning as a type of learning in which web based learning is coordinated with the conventional homeroom learning inside single structure, where web based learning abilities, regardless of whether PC based or Internet-based, are utilized, for example, PC lab and brilliant class, and where instructor and understudies meet online more often than not. Then again, Margolis, et al. (2017) characterized blended learning as instructive technique dependent on mixing various methods by which data is conveyed reliably to accomplish the instructive results. Gambari, et al. (2018) contended that blended learning depends on the work of innovation and choice of the most proper instructional methods by which to take care of issues that are identified with study hall the executives, and utilizing learning oriented exercises that require precision and authority. Blended learning structures normal advancement of learning in the contemporary time and proposes stunning answers for adapt to current instructive difficulties and to address instructive issues of people since it is an equation of educating, learning and preparing that incorporated internet learning with customary homeroom instructing inside one system (Nortvig, et al. 2018). Moreover, blended learning approaches permit utilizing electronic abilities whether PC based or Internet-based, in addressing and instructional meetings normally embraced in virtual homerooms empowered with data innovation and correspondence capacities (Ramirez-Arellano, et al. 2019). The audit of the past meanings of mixed adapting unmistakably shows that blended learning joins key components of both customary learning, for example, educator understudy association in homeroom with the critical element of web based learning as spoken to by the utilization of present day innovation like PC, Internet, visiting, and messages to improve the picking up instructing measure. The creators (Rahmanda, et al. 2020) contended that when planning mixed learning, the climate should deliberately arranged to accomplish successful utilization of the internet learning innovation and to distinguish program medium usefulness. Bataineh&Mayyas, (2017) focused on the need to ensure that instructors and understudies own the abilities to utilize web based learning innovation, as lacking such aptitudes would bargain the learning; and to hold public meeting combining educators and understudies. In a blended

learning program the objectives, plan, usage, and methodology should be plainly characterized; instructors should be accessible in ideal opportunity to react to understudies' inquiries whether on the web or eye to eye cooperation in homeroom; and learning assets should be jumpers to meet individual contrasts among students (Tawafak, et al. 2018).

### **Academic Self-Concept and Academic Achievement**

Self-concept is the way in which individuals see their qualities, shortcomings, abilities, perspectives, and qualities. It is quite possibly the main mental develops in the social sciences (Simonsmeier, et al. 2020). As per Kumi–Yeboah, et al. (2018), self-concept fills in as a significant factor that impacts financial achievement, and long haul wellbeing and prosperity. The longing to feel decidedly about oneself and the advantages of this inclination on decision, arranging, perseverance, and ensuing achievements are additionally all around recorded through exploration (Crossley, et al. 2020). In spite of the fact that exploration proof recommends the importance of a positive Self-concept to accomplishment, numerous instructive approach proclamations likewise underscore Self-concept upgrade as a focal objective of schooling, and emphasize Self-concept as a significant interceding factor that encourages the achievement of other alluring learning, mental, and social results (Vanslambrouck, et al. 2019). Self-concept is an area explicit develop as per the multidimensional, various leveled model of Self-concept (Baragash& Al-Samarraie, 2018). In this model, worldwide Self-concept is at the zenith of the chain of importance and it is isolated into scholarly and nonacademic parts. The scholastic segment is partitioned into self-ideas explicit to class subjects, including English and Mathematics, though the nonacademic segment is isolated into physical, social, and passionate segments. It is proposed that particular segments of Self-concept should have more prescient force on results in explicit spaces than a solitary, worldwide segment of self-idea. Exploration in instruction shows that scholarly accomplishment is more correlated with scholastic Self-concept than worldwide self-idea, and that accomplishment in explicit areas should be connected with the comparing explicit spaces of Self-concept (Kintu, et al. 2017). Following this line of thought, in this examination, specific consideration has been given to how understudies see their capacities in English and Mathematics, and how the two factors anticipated accomplishment in English and Mathematics, separately. English and Mathematics were picked as the objective subjects for two reasons. To begin with, these two subjects were normally the focal point of examination in past investigations. Self-concept scales have been grounded with acceptable dependability and legitimacy (Nortvig, et al. 2018). Second, English and Mathematics are significant subjects in Hong Kong and dominance of these two subjects for the most part requires the utilization of various learning methodologies. Albeit Self-concept is found to foresee positive accomplishment results, late exploration has demonstrated the proportional connection between scholastic Self-concept and scholarly accomplishment (Cocquyt, et al. 2019).

## **Self-determined blended learning**

With a student focused development of mixed learning, the decisions of what and when to mix will progressively be controlled constantly by students instead of educators (Broadbent & Fuller-Tyszkiewicz, 2018). Vasbieva, et al. (2016) contends that this isn't new and students have normally included learning components: "They add what is missing, they blend it in with what they need, and they deduct what isn't significant. They mingle it. They discover setting. Furthermore, they change preparing and guidance into learning" (Wichadee, 2017). Consequently, what is important to advance a student focused conceptualization of blended learning in advanced education is for establishments and instructors to grasp and use blended learning through the plan, help and backing of blended learning encounters (Hui, et al. 2019). The desire that understudies will draw in and control mixes that fit their requirements and inclinations starts with blended learning unit plan. A move is required for instructors to think about the entire educational plan and a "weaving through", as opposed to "attaching", of blended learning draws near (Najafi, 2019). Be that as it may, compelling blended learning configuration is just important for what is needed for effective student focused mixed learning. A few students will show up prepared to make proper determinations for learning while others will suffocate in an ocean of potential outcomes - subsequently when offering choices it is imperative to help understudies to settle on fitting decisions (Macdonald, 2008). Through compelling help, teachers can uphold understudies to comprehend what it is they are required to learn, the decisions they have accessible to them when learning and can help them to build up the important abilities of reflection, self-heading and self-administration. In that lays the potential for mixed figuring out how to give the adaptability, autonomy and duty, in addition to metacognitive cycles, fundamental for the advancement of oneself decided student (Hipol, et al. 2020).

## **Self-efficacy's Role in achieving academic performance**

Self-efficacy (individuals' convictions about their abilities to create assigned degrees of execution that activity impact over occasions that influence their lives (Auster, 2016), related altogether to self-managed learning and to understudy objective direction (Ellis, et al. 2016). Self-efficacy might be associated with expanded adaptability that might be valuable in a moving work market (Montgomery, et al. 2019). This proposition proposed to investigate blended learning as a potential component to expand understudy self-concept (Margolis, et al. 2017). Whenever blended learning can exhibit improvement in understudy self-concept and results, it may have suggestions for future curricular plan, understudy maintenance, and professions (Gambari, et al. 2018).

## **The relationship between Blended Learning and academic Self efficacy**

The realistic explanation blended learning was the focal point of this investigation this examination was the quickened development of mixed learning. This development expanded the need to see how this learning methodology influences explicit parts of learning (Nortvig, et al. 2018). Whenever blended learning met or outperformed the learning results of customary up close and personal learning (Ramirez-Arellano, et al. 2019), this investigation may permit knowledge with respect to whether this developing instructive conveyance framework can expand understudy self-concept (Castle and McGuire, 2010), a fundamental ability connected to understudy maintenance and achievement (Rahmanda, et al. 2020). However, a few investigations indicated a divergence of discernment between understudies' for the most part certain responses to the adequacy of blended learning and numerous employees' more incredulous response to this showing technique (Bataneh&Mayyas, 2017). An objective of this investigation was to talk about whether employees figured blended learning can improve understudy self-concept hypothesis was created in the 1970's by Simonsmeier, et al. (2020) as a subset or showing component of Bandura's bigger hypothesis of learning , and how individuals use social conditions to learn (Tawafak, et al. 2018). Bandura himself noticed that there are a few sorts of self-concept and there is no single meaning of self-concept that fits all circumstances "Self-concept is worried about apparent capacity and should be stated as far as can do as opposed to will do. Can is a judgment of ability; will is an assertion of aim" (Kumi-Yeboah, et al. 2018). Crossley, et al. (2020) set that "Apparent self-concept is characterized as individuals' convictions about their capacities to create assigned degrees of execution that activity impact over occasions that influence their lives. Self-concept convictions decide how individuals feel, think, persuade themselves and carry on (Vanslambrouck, et al. 2019)." A solid ability to be self-concept viability assists individuals with moving toward troublesome errands as moves to be dominated as opposed to as dangers to be kept away from, cultivating "inherent interest" and "profound engagement in exercises (Baragash& Al-Samarraie, 2018)." There is no target limit of discovering that demonstrates self-concept is available (Kintu, et al. 2017); self-concept is accomplished when the individual inside accepts the job needing to be done can be finished. As per Nortvig, et al. (2018), view of self-concept impact whether individuals think whimsically or deliberately; regardless of whether they continue hopefully or skeptically. Cocquyt, et al. (2019) clarified how these convictions work in the accompanying section: Self adequacy... additionally impacts the game-plans individuals decide to seek after, the difficulties and objectives they set for themselves and their obligation to them, how much exertion they set forth in given undertakings, the results they anticipate that their endeavors should create, how long they drive forward despite deterrents, their versatility to misfortune, the nature of their enthusiastic life and how much pressure and despondency they experience in adapting to burdening ecological requests, and the existence decisions they make and the achievements they

understand. Likewise, self-concept is definitely not a static state for the student; the circumstance in which the student exists may increment or abatement self-concept (Vasbieva, et al. 2016). In this way, self-concept straightforwardly influences exertion and perseverance and is straightforwardly affected by seen hindrances. Likewise, as expressed already, the alternative of relinquishing or proceeding with a game-plan, or influencing one's current circumstance is, by definition, heavily influenced by the self-concept individual without the capacity to pick, self-concept doesn't exist (Wichadee, 2017). A few instruments that measure self-concept are at present being used (Hui, et al. 2019) evaluate various techniques (self-concept scales and tried overviews) of surveying self-adequacy, and build up a suitable calculated comprehension of the field research foundation to satisfactorily evaluate the idea of self-concept advancement (Najafi, 2019).

### **Lecturers' Attitudes towards Blended Learning**

Lecturers have communicated clashing perspectives with respect to blended learning (Hipol, et al. 2020). Studies have noted workforce eagerness to show mixed learning, yet some felt the courses were equivalent to or of lower quality than conventional courses (Auster, 2016). A few creators noted workforce felt that mixed courses may upgrade understudy control of picking up, urging understudies to utilize messages all the more completely (Ellis, et al. 2016), which may build understudy self-adequacy (Montgomery, et al. 2019). The primary explanation referred to by staff for neglecting to regard, appreciate or energize instructing blended learning was the discernment that the mixed course was not as esteemed—for understudies or themselves—as a conventional learning model (Margolis, et al. 2017). Investigations of educators' inspiration for instructing mixed 20 classes may even correspond with the teachers' own self-appreciation viability (Gambari, et al. 2018). For example, personnel who had extraneous and natural inspiration to show mixed classes, who felt alright with the configuration, and who felt that their understudies would have the option to learn so a lot or more in a mixed climate, were very ready to participate in this conveyance (Nortvig, et al. 2018). It was not just the comfort that engaged them; educators keen on friend assessment were bound to embrace mixed courses (Ramirez-Arellano, et al. 2019). Self-concept hypothesis was created in the 1970's by Albert Bandura (2002/2011) as a subset or showing component of Bandura's bigger hypothesis of learning (Social Learning Theory), and how individuals use social conditions to learn (Social Cognitive Theory) (Rahmanda, et al. 2020). Bandura himself noticed that there are a few sorts of self-concept and there is no single meaning of self-concept that fits all circumstances "Self-concept is worried about apparent capacity and should be expressed as far as can do instead of will do. Can is a judgment of ability; will is an assertion of goal" (Bataneh&Mayyas, 2017). Tawafak, et al. (2018) set that "Apparent self-concept is characterized as individuals' convictions about their abilities to create assigned degrees of execution that activity impact over occasions that influence their lives. Self-concept convictions decide how individuals feel, think, propel themselves and

carry on (Simonsmeier, et al. 2020)." A solid ability to be self-concept adequacy assists individuals with moving toward troublesome assignments as moves to be dominated instead of as dangers to be stayed away from, cultivating "characteristic interest" and "profound immersion in exercises (Kumi–Yeboah, et al. 2018)." There is no target edge of discovering that shows self-concept is available (Crossley, et al. 2020); self-concept is accomplished when the individual inside accepts the main job can be finished. As per Vanslambrouck, et al. (2019), impression of self-concept impact whether individuals think sporadically or deliberately; regardless of whether they continue hopefully or skeptically. Baragash& Al-Samarraie, (2018), clarified how these convictions work in the accompanying entry: Self-concept likewise impacts the approaches individuals decide to seek after, the difficulties and objectives they set for themselves and their obligation to them, how much exertion they set forth in given undertakings, the results they anticipate that their endeavors should deliver, how long they continue on notwithstanding deterrents, their flexibility to affliction, the nature of their enthusiastic life and how much pressure and gloom they experience in adapting to burdening ecological requests, and the existence decisions they make and the achievements they understand. Additionally, self-concept is definitely not a static state for the student; the circumstance in which the student exists may increment or reduction self-concept(Kintu, et al. 2017). In this way, self-concept straightforwardly influences exertion and constancy and is straightforwardly affected by seen obstructions. Likewise, as expressed already, the choice of deserting or proceeding with a game-plan, or influencing one's current circumstance is, by definition, heavily influenced by the self-concept individual without the capacity to pick, self-concept doesn't exist (Nortvig, et al. 2018). A few instruments that measure self-concept are as of now being used (Cocquyt, et al. 2019) and are referred to in later segments of this proposal. These instruments: 1) evaluate various strategies (self-concept scales and tried overviews) of surveying self-adequacy, and 2) build up a proper reasonable comprehension of the field research foundation to satisfactorily survey the idea of self-concept improvement.

#### **4. Methodology**

The research was carried out at the private universities in Erbil. The researcher used a quantitative technique to collect significant information concerning the effect of blended education on according to the Moodle and Google Meet program on the student's academic self-concept, behavioral problems and executive functions in selected private universities in Kurdistan. This section describes the research methodology. In particular, it illustrates the study's sampling; the dimensions utilized in generating the research instrument, clarify the process data collection, and explain the technique utilized to examine the collected data. The methodology is separated into five sections; the first explains the design of the study. The second section describes research methods, both primary and secondary methods. The third describes specifics of the survey collection time period. The fourth section, discusses the sample size, population and target population. The final section explores the instruments for measuring items.



In particular, researchers used a five point Likert scale with potential answers ranging from strongly disagree to strongly agree.

### **Research hypothesis**

There is a positive and significant relationship between blended learning academic self-concept at selected private universities in Erbil.

### **Design of the Study**

The researcher utilized a survey in order to gather data about the analysis of The effect of blended education on according to the Moodle and Google Meet program on the student's academic self-concept, behavioral problems and executive functions in selected private universities in Kurdistan. The survey consisted of two parts. The first part included the followings; background questions of participants for instance; participants' education, participants' age, years of experience in respondent's marital status. The second section of the questionnaire consisted different question regarding to the blended learning and academic self-concept.

### **Procedures Used for Generating, Collecting and Evaluating Data**

The author collected data for this research by handling out surveys as primary research method. The survey is organized and handed out to students from different private universities and from different departments. Moreover, the secondary research method is required for conducting this study by concentrating on the up-to-date articles, blended learning and higher education books and related researches concerning online learning, blended learning, academic self-concept, and academic performance.

### **Sampling Size and Target Population**

The researcher utilized a random sampling technique to gather information and data from different private universities in Erbil, the main purpose of random technique to give an equal chance to the entire population. The author distributed 200 surveys in a hard copy format; however, 137 questionnaires were received and being completed properly accordingly the sample of the current research = 137 respondents.

### **Instrument for Measuring (Scales)**

The survey is prepared as multiple choice inquiries. The respondents were requested to rate their agreement on each unit based on a Likert scale. The survey is prepared and modified from the different academic sources.

### **Data analysis**

### **Reliability test**

**TABLE 1. RELIABILITY TEST**

Variable	Cronbach's Alpha	N of Items
Blended Learning	.815	8
<b>Academic Self-concept</b>	.770	8

As seen in table (1), the reliability tests for the current study, the researcher finds out the Alpha for blended learning =.815 for four items since .815 is greater than .6 (Kothari,2005), therefore all dimensions utilized for blended learning found to be reliable for this study, and the value of Alpha for academic self-concept =.770 for eight dimensions, it was found that all eight dimensions utilized for academic self-concept found to be reliable.

**Correlation analysis**

**TABLE 2. CORRELATION ANALYSIS**

Correlations		
Variables	Pearson Correlation	Academic Self-concept
Blended Learning		.713**
	Sig. (2-tailed)	.000
	N	444

As seen in table (2), the correlation analysis, it can be seen that the blended learning as independent variable has significantly correlated,  $r = .713^{**}$  this demonstrates that there is a weak correlation between blended learning as independent variable and academic self-concept as dependent variable.

**Regression Analysis**

**TABLE 3. MULTIPLE REGRESSION ANALYSIS**

Independent variable	Coefficients	t-value	P-value
<b>Blended Learning</b>	.729	1.578	.000
<b>R<sup>2</sup></b>	.076		
<b>F value</b>	5.946		.000

Dependent Variable: Academic self-concept

The researcher utilized regression method to examine the relationship between each independent factor and dependent factor. In this section the researcher attempted to find the relationship between blended learning as an independent variable and academic self-concept as dependent variable. As seen in table (3) the result of research hypothesis, blended learning has significantly predicted academic self-concept (the value Beta = .729,  $p < .001$ , therefore the researcher came to conclude that blended learning has significant relationship academic self-concept.

**Conclusion**

The study design and low response rates for the survey and interviews mean it is not possible to generalize the findings to all students in the course, nor to other courses and contexts. However the richness of the data from this case has illustrated patterns of student engagement, learning, and self-determination that further support the potential of learner-centered blended learning designs in higher education. The findings of this study suggest that successful learners are aware of their learning and situational

needs and preferences, and are able to select learning formats to fit their changing needs. While the search for the most appropriate combination of blended learning formats continues, it is argued that a learner-centered view of blended learning requires acceptance that there will be endless successful combinations – as many as there are individual students. Furthermore, it is not the role of the teacher to prescribe the nature of the blend but to develop courses with multiple means of representation, expression and engagement, and to scaffold and support students in the creation of their own individualized blend. In this way, students will engage and also develop their skills as reflective, self-directed, self-regulating and indeed, self-determined learners. The result of research hypothesis, blended learning has significantly predicted academic self-concept (the value Beta = .729,  $p < .001$ , therefore the researcher came to conclude that blended learning has significant relationship academic self-concept.

## References

- Auster, C. J. (2016). Blended learning as a potentially winning combination of face-to-face and online learning: An exploratory study. *Teaching Sociology*, 44(1), 39-48.
- Baragash, R. S., & Al-Samarraie, H. (2018). Blended learning: Investigating the influence of engagement in multiple learning delivery modes on students' performance. *Telematics and Informatics*, 35(7), 2082-2098.
- Bataineh, R. F., & Mayyas, M. B. (2017). The utility of blended learning in EFL reading and grammar: A case for Moodle. *Teaching English with Technology*, 17(3), 35-49.
- Broadbent, J., & Fuller-Tyszkiewicz, M. (2018). Profiles in self-regulated learning and their correlates for online and blended learning students. *Educational technology research and development*, 66(6), 1435-1455.
- Cocquyt, C., Zhu, C., Diep, A. N., De Greef, M., & Vanwing, T. (2019). Examining the role of learning support in blended learning for adults' social inclusion and social capital. *Computers & Education*, 142, 103610.
- Crossley, S. A., Karumbaiah, S., Ocumpaugh, J., Labrum, M. J., & Baker, R. S. (2020). Predicting Math Identity Through Language and Click-Stream Patterns in a Blended Learning Mathematics Program for Elementary Students. *Journal of Learning Analytics*, 7(1), 19-37.
- Ellis, R. A., Pardo, A., & Han, F. (2016). Quality in blended learning environments—Significant differences in how students approach learning collaborations. *Computers & Education*, 102, 90-102.
- Gambari, A. I., Shittu, A. T., Ogunlade, O. O., & Osunlade, O. R. (2018). Effectiveness of blended learning and elearning modes of instruction on the performance of undergraduates in Kwara State, Nigeria. *MOJES: Malaysian Online Journal of Educational Sciences*, 5(1), 25-36.
- Hipol, A. I., Cabahug, R., & Bongon, R. (2020). Impact of blended learning instruction in academic performance of grade 10 students in a

- selected private high school in San Juan City, Philippines. *JPhCS*, 1470(1), 012052.
- Hui, Y. K., Li, C., & Qian, S. (2019). Learning engagement via promoting situational interest in a blended learning environment. *Journal of Computing in Higher Education*, 31(2), 408-425.
  - Kintu, M. J., Zhu, C., & Kagambe, E. (2017). Blended learning effectiveness: the relationship between student characteristics, design features and outcomes. *International Journal of Educational Technology in Higher Education*, 14(1), 7.
  - Kumi-Yeboah, A., Dogbey, J., & Yuan, G. (2018). Exploring factors that promote online learning experiences and academic self-concept of minority high school students. *Journal of Research on Technology in Education*, 50(1), 1-17.
  - Margolis, A. R., Porter, A. L., & Pitterle, M. E. (2017). Best practices for use of blended learning. *American Journal of Pharmaceutical Education*, 81(3).
  - Montgomery, A. P., Mousavi, A., Carbonaro, M., Hayward, D. V., & Dunn, W. (2019). Using learning analytics to explore self-regulated learning in flipped blended learning music teacher education. *British Journal of Educational Technology*, 50(1), 114-127.
  - Najafi, H. (2019). Presenting the causal model of the Components of Blended Learning and Emotional Intelligence and Their Effect on Academic Performance. *Iranian Journal of Medical Education*, 19, 271-281.
  - Nortvig, A. M., Petersen, A. K., & Balle, S. H. (2018). A Literature Review of the Factors Influencing E-Learning and Blended Learning in Relation to Learning Outcome, Student Satisfaction and Engagement. *Electronic Journal of e-Learning*, 16(1), 46-55.
  - Rahmanda, G. A., Sandhi, I. K., & Sunaryo, K. (2020, October). Analysis of the Effect of Blended Learning Implementation to Academic Productivity Performance in Beginning Pandemic. In *Proceeding of LPPM UPN "Veteran" Yogyakarta Conference Series 2020-Economic and Business Series* (Vol. 1, No. 1, pp. 141-146).
  - Ramirez-Arellano, A., Bory-Reyes, J., & Hernández-Simón, L. M. (2019). Emotions, motivation, cognitive–metacognitive strategies, and behavior as predictors of learning performance in blended learning. *Journal of Educational Computing Research*, 57(2), 491-512.
  - Simonsmeier, B. A., Peiffer, H., Flaig, M., & Schneider, M. (2020). Peer Feedback Improves Students' Academic Self-Concept in Higher Education. *Research in Higher Education*, 1-19.
  - Tawafak, R. M., Romli, A. B., bin Abdullah Arshah, R., & Almaroof, R. A. S. (2018). Assessing the impact of technology learning and assessment method on academic performance. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(6), 2241-2254.
  - Vanslambrouck, S., Zhu, C., Pynoo, B., Lombaerts, K., Tondeur, J., & Scherer, R. (2019). A latent profile analysis of adult students' online self-regulation in blended learning environments. *Computers in Human Behavior*, 99, 126-136.

- Vasbieva, D. G., Klimova, I. I., Agibalova, E. L., Karzhanova, N. V., & Bírová, J. (2016). Enhancement of students' vocabulary learning through a blended learning approach. *International Electronic Journal of Mathematics Education*, 11(5), 1195-1203.
- Wichadee, S. (2017). A development of the blended learning model using Edmodo for maximizing students' oral proficiency and motivation. *International Journal of Emerging Technologies in Learning (iJET)*, 12(02), 137-154.