

Effects Of Online Differentiated Instruction On Gifted Students' Engagement Post Covid-19: Surveying Students And Teachers' Perspectives

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Abbreviated title: Online Differentiated Instruction*

ABSTRACT . The purpose was to investigate gifted students and their teachers views regarding the effects of online differentiated instruction on gifted students' engagement post covid-19. **Method:** This study employed cross-sectional descriptive method, with the main focus on gifted students and their teachers at middle and secondary school levels. The study was conducted in Feb., 2022. The sample of the study consisted of gifted students and their teachers at middle and secondary school levels. 60 gifted students' teachers and 120 students were selected randomly. **Findings:** Results indicate that do not differ in their views regarding the effects of online differentiated instruction on gifted students' engagement post covid-19. No differences were found between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by gender, academic qualification and years of experience(3 years, 4-6 years, more than 7 years). **Conclusion:** Based on all of the analyses both teachers and students were highly motivated toward online differentiated instruction, regardless teachers' gender(males and females), academic qualification and years of experience.

KEYWORDS Online Differentiated Instruction, SCAMPER Strategy, Artistic Skills, Kindergarten Children.

INTRODUCTION

The current era is witnessing many rapid and continuous developments in various fields, including the field of education and the educational process, where the interest in education means developing self-learning processes and motivating students to develop their skills, educational and mental abilities, decision-making skills, directing and organizing their learning process, monitoring and evaluating their performance . However, learning and teaching were only concerned with collecting knowledge, facts and information and filling it in the minds of students by adopting methods of memorization(Boelens et al. 2018;Cantor

et al. 2018; Osher et al. 2018; de Graaf et al. 2019; Demir& İlhan2022).

Perhaps one of the most important challenges facing teachers is the diversity and great difference between the levels of learners, as we find teachers struggle in trying to respond to the wide and growing spectrum of students' distinct needs, backgrounds and learning styles(Banna2019). In response to the challenges and requirements that teachers and students suffer during the educational process, a new concept known as differentiated instruction(DI) has emerged(Eissa& Mostafa2013; Ahmed2014). It has received a great deal of care and attention by educational systems

and institutions in various developed countries of the world, as it gives the student the greatest opportunity in the field of learning and reduces the role of the teacher in a way that enhances aspects of effective and purposeful education (Gomaa2014; Huseini& Abdullah2014; Zens2021).

DI is one of the methods used to achieve a specific goal for all students by assigning them various tasks that take into account the individual differences between them, and satisfy their desires, tendencies and interests. Responding to it, not when it appears in the educational situation, but rather it is a basis when planning lessons(Li2021)

DI aims to teach all students of all abilities and skills. It is a continuous process of learning that takes care of students' needs and interests and the use of knowledge. It includes various assessment methods, strategies and activities, which aim to raise students' educational skills and capabilities, in addition to meeting their different needs and helping them in the learning process (Ismajli& Imami-Morina2018).

DI has received care and attention from educational systems and institutions in various developed countries of the world, as it gives the student the greatest opportunity in the field of learning and reduces the role of the teacher, in a way that enhances the aspects of effective and purposeful education (Dixon et al.2014;Garba& Muhammad2015). It gives students an opportunity to organize the educational environment, reorganize the scientific material and formulate it in solid scientific patterns and conclusions based on accuracy, analysis, comparison, classification and scientific observation(Onyishi& Sefotho2020).

Following the traditional methods of teaching, which depends on filling the students' minds with information without understanding or realizing the relationships between this information, and the way the topics are presented in the textbook makes the study materials dry and meaningless or important for students. It does not lead to arousing students interest.

Based on the foregoing, the researcher believes that there is an urgent need to keep pace with everything that is modern in teaching strategies and methods, as it is no longer acceptable to adhere to traditional methods. They are no longer sufficient to meet the requirements of the educational and pedagogical process.

LITERATURE REVIEW

IDENTIFYING GIFTED AND TALENTED STUDENTS

Gifted and talented students need special kinds of programs that serve their needs and

help them improve their talents (Eissa & Sayed2012;Shareef2018).

Pfeifer (2012,P. 6)presents a definition of giftedness that reflects the contemporary understanding of gifted students, seeing that "Children and youth of exceptional talent perform or demonstrate the ability to perform at significantly higher levels of achievement when compared to those of their age, experience, or environment. These children and youth demonstrate a high ability to perform in the intellectual, creative, and artistic fields, have a normal ability to lead, or excel in certain academic areas, and they need services or activities that are not normally or traditionally provided by schools. The outstanding talents are found in children and youth of all ages cultural groups, across all economic sectors, and in all areas of human behaviour.

DIFFERENTIATED INSTRUCTION FOR GIFTED AND TALENTED STUDENTS

Educational institutions were at the forefront of the sectors most affected by the “Covid 19” pandemic, and in all countries of the world without exception, as the pandemic led to the interruption of more than 1.6 billion children and young people from education (Islam2019; Kayaalp et al.2021; Çoban& Yazıcı2022), which prompted the countries of the world to search for alternative methods to prevent the educational process from stopping (Yazıcı et al.2021). In this context, several initiatives came to transform a number of smart applications into distance learning platforms. Within a short period of time, the features of traditional education changed, which was no longer able to meet the requirements of the education system, accommodate large numbers of learners at all stages, and search for new forms of learning (Taner et al.2021; Ulaş et al.2021). The tremendous technological development has contributed to achieving this transformation, which in turn created a new reality in rethinking the education system in terms of its philosophy, objectives, curricula and means, and studying all future and expected scenarios in the stage of coexistence with that pandemic and beyond (Yakar 2021;Kurtdede et al.2022).

The concept of giftedness is multidimensional, and includes characteristics related to personality, knowledge, and behavior. Despite the developments in research during the past decades, talent theories have different perspectives on what talent is and how a gifted person can be identified. Over the past three decades, Renzulli has described talent in the Three Ring Model, where he assumes three characteristics of any gifted person: task commitment, innovation, and above-average ability. As for Gagné, he

describes talent in his Differentiated Model of Giftedness and Talent - DMGT as an expression of gifted natural ability. The gifted student has a natural ability and is affected by the internal environmental and personal factors that help the gifted ability to transform into a talent, according to Jahneh. Therefore, talent is seen as a combination of biological determinants and environmental factors, ie educational opportunities(Leticia et al.2015).

Hertberg-Davis(2009) states that it should not be surprising when many schools abandon traditional programs for the gifted in order to educate gifted students using curriculum differentiation and teaching in the regular classroom. Gifted students, and classrooms should be places where students' talents are discovered and developed. However, many teachers find it difficult to focus on differences between students when they are in a high-stakes testing environment that requires more focus on learning by memorizing and memorizing, and to focus on a few competencies.

Educators often assume that because gifted students have high intelligence and skills, they do not need any form of differentiation. This is completely contrary to the reality of gifted students in the classroom, as these students have social, emotional, and academic needs that should not be ignored or neglected in the classroom. To ensure that their mental and academic needs are met, teachers should provide multiple educational encounters for gifted students through a differentiation of content, product, process, learning environment, and sentiment.

In a mixed-method study that examines data gathered from 101 elementary teachers to investigate their perceptions about Differentiated Instruction (DI) based on qualification and experience, Shareefa et

al.(2019) indicated that teachers had a high perception on DI, while no statistically significant difference in teachers' perceptions based on their experience and qualification was identified.

Kamarulzaman et al.(2021)aimed to explore the practice of online differentiated instruction by teachers and examined its impact on students' motivation and academic performance during the Covid-19 outbreak. study employed a mixed method research design, utilizing the framework of teacher cognition to explore the teachers' practice of online differentiated through interviews; and, utilizing a survey design using a questionnaire to determine the impact of online differentiated instruction towards students' motivation and academic performance. The findings revealed that although online differentiated instruction is feasible, however, appropriate combination of differentiation constructs need to be applied in order to achieve higher motivation and better academic performance among the students

This study seeks to give answer to the following core question

How gifted students and their teachers view the effects of online differentiated instruction post covid-19 on gifted students' engagement?

Purpose

The purpose was to investigate gifted students and their teachers views regarding the effects of online differentiated instruction on gifted students' engagement post covid-19.

Hypotheses

The following hypotheses were tested

1. There are no differences between teachers and students responses regarding the effects of online differentiated

instruction on gifted students' engagement post covid-19.

2-There are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by gender.

3. There are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by academic qualification.

4. There are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by years of experience(3 years, 4-6 years, more than 7 years).

METHODOLOGY

This study employed cross-sectional descriptive method, with the main focus on gifted students and their teachers at middle and secondary school levels. The study was conducted in Feb., 2022.

Participants

The sample of the study consisted of gifted students and their teachers at middle and secondary school levels. 60 gifted students' teachers and 120 students were selected randomly, which is deemed significant to provide useful feedback on both teachers and students' perceptions of online differentiated instruction.

Gifted students' teachers

Of the 60 gifted students' teachers, 34 hold bachelor degree, 16 hold a high diploma, and 10 hold a master degree. The mean of gifted students' teachers ranges from 25 to 40 years old with an standard deviation (SD) of 6.034. All of them experienced online differentiated instruction.

Students

A total of 120 were gifted students . 70 were males, and 50 were females. Of this sample, 78 were at secondary school level, and 42 were at middle school level. All of them experienced online differentiated instruction.

Data Gathering Instruments

A 15-item instrument was created to measure gifted students and their teachers views regarding the effects of online differentiated instruction. Each item was

measured on a 3-point Likert scale (3= agree to 1= disagree).

Instrument reliability and validity

Table 1 shows that the Cronbach's alpha of each item and the whole questionnaire are greater than the recommended threshold of 0.7. Besides, all corrected item-total correlation values were higher than the acceptability value of 0.5, that is, the internal consistency of the questionnaire was fairly well.

Table 3. Reliability test for each item, variable and the whole scale

Variable/item	Corrected item-total correlation	Cronbach's α if item deleted	Cronbach's α
Item1	0.844	0.877	0.89
Item2	0.755	0.805	
Item3	0.766	0.815	
Item4	0.747	0.807	
Item5	0.750	0.811	
Item6	0.744	0.801	
Item7	0.844	0.877	
Item8	0.755	0.805	
Item9	0.766	0.815	
Item10	0.747	0.807	
Item11	0.844	0.877	
Item12	0.755	0.805	
Item13	0.766	0.815	
Item14	0.747	0.807	
Item15	0.766	0.815	

Instrument validity

For convergent validity of the instrument , correlation with Teachers' Perceptions on Differentiated Instruction (Shareefa et al.

2019) was significant ($r = 0.63, p < .01$). The content validity of the scale was examined by a group of 6 experts. They assessed the relevance of each item using a four-point Likert scale (where 1 represents "irrelevant" and 4 represents "highly relevant"). They provided suggestions and comments. The 15 items were judged to be quite or highly relevant. A content validity index was calculated at the item level (I-CVI = 0.90).

Results

Testing Hypotheses

The first hypothesis states " There are no differences between teachers and students responses regarding the effects of online differentiated instruction on gifted students' engagement post covid-19". T-test was used. The result of the two independent sample t-test (see Table 2) demonstrates that t- value = $-.212, p < 0.05$). This means that both groups do not differ in their views regarding the effects of online differentiated instruction on gifted students' engagement post covid-19.

Table 2. two independent sample t-test results

Group	M	SD	T	P
Teachers	39.20	1.02	-.212	.567
Students	37.89	1.13		

The second hypothesis states " There are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by gender". T-test was used. The result of the two independent sample t-test (see Table 3) demonstrates that t- value = $-.310, df = 119, p < 0.05$). This means that both

groups (male and female teachers) do not differ in their views regarding the effects of online differentiated instruction on gifted students' engagement post covid-19. That is, no significant difference was identified in the mean scores between female teachers and male teachers.

Table 3. two independent sample t-test results (by gender)

Group	M	SD	T	P
Males	40.43	1.11	-.310	.602
Females	41.60	1.24		

The third hypothesis states " There are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by academic qualification". For the purpose of the analysis, teachers were

divided into three groups based on their academic qualification. Group 1 had 34 (hold bachelor degree) , Group 2 had 16 (hold high Diploma degree). The final group (Group 3) had 10 (hold master degree). A one-way ANCOVA was

performed considering academic qualification as the independent variable and effects of online differentiated instruction on gifted students' engagement post covid-19 as the dependent variable. As can be seen in Table 4, the result of the ANOVA shows that the F-value was larger than the alpha level $P = 1,267 < 0.05$. That

is, no significant difference was identified in the mean scores between the three groups. Therefore, it can be concluded that there are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by academic qualification.

Table 4. ANOVA results by academic qualification

	Sum of Squares	df	Mean Square	F.	P
Between Groups	87.19	3	29.063	1,267	0,301
Within Groups	143,90	116	1.240		
Total	230,109	119			

The fourth hypothesis states " There are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by years of experience(3 years, 4-6 years, more than 7 years)". For the purpose of the analysis, teachers were divided into three groups based on their years of experience. Group 1 (3 years of experience) , Group 2 (4-6 years of experience). The final group (Group 3; more than 7 years of experience). A one-way ANCOVA was performed considering years of experience as the independent variable and effects of

online differentiated instruction on gifted students' engagement post covid-19 as the dependent variable. As can be seen in Table 5, the result of the ANOVA shows that the F-value was larger than the alpha level $P = 1,401 < 0.05$. That is, no significant difference was identified in the mean scores between the three groups. Therefore, it can be concluded that there are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by years of experience(3 years, 4-6 years, more than 7 years).

Table 5. ANOVA results by years of experience

	Sum of Squares	df	Mean Square	F.	P
Between Groups	92.01	3	30.67	1,401	0,288
Within Groups	155,22	116	1.338		
Total	250,118	119			

Discussion

The purpose was to investigate gifted students and their teachers views regarding the effects of online differentiated

instruction on gifted students' engagement post covid-19. Concerning the differences between teachers and students responses regarding the effects of online

differentiated instruction on gifted students' engagement post covid-19, The result shown in table 2 of the two independent sample t-test demonstrates that t- value = -.212, $p < 0.05$). This means that both groups do not differ in their views regarding the effects of online differentiated instruction on gifted students' engagement post covid-19.

As for the differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by gender, the result shown in table 3 of the two independent sample t-test demonstrates that t- value = -.310, $df = 119$, $p < 0.05$). This means that both groups (male and female teachers) do not differ in their views regarding the effects of online differentiated instruction on gifted students' engagement post covid-19. That is, no significant difference was identified in the mean scores between female teachers and male teachers.

As for the differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by academic qualification, as can be seen in Table 4, the result of the ANOVA shows that the F-value was larger than the alpha level $P = 1,267 > 0.05$. That is, no significant difference was identified in the mean scores between the three groups. Therefore, it can be concluded that there are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by academic qualification.

Concerning, the differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by years of experience (3 years, 4-6 years, more than 7 years), as can be seen in Table 5, the result of the ANOVA shows that the F-value was larger than the alpha level $P = 1,401 > 0.05$. That is, no significant difference was

identified in the mean scores between the three groups. Therefore, it can be concluded that there are no differences between teachers regarding the effects of online differentiated instruction on gifted students' engagement post covid-19 by years of experience (3 years, 4-6 years, more than 7 years).

These results go in the same line with previous research (e.g. Blake, 2013; Southgate et al., 2011; Maddox, 2015; Yao, 2019) that using technology in teaching students in general and gifted and talented ones in particular plays an important role in blended learning and is also a tool because of its positive impact on student engagement.

Conclusion

Based on all of the analyses both teachers and students were highly motivated toward online differentiated instruction, regardless teachers' gender (males and females), academic qualification and years of experience. The overall positive perception found in the present study can be attributed to students and teachers' beliefs with regards to the benefits of ODI in learning and teaching.

Recommendation

It is recommended that we pay enough attention to DI, as students in this approach are explorers and active, teachers direct the exploration process, plans diverse and simultaneous activities in distinct classes, the teacher acts as a guide or facilitator for learning more than a carrier of information, the learner is responsible for his work, the learning goal grows independently in thought, planning, evaluation, and setting goals is common between teachers and students based on student aptitudes, interests, personal learning profile.

References

1. Ahmed, M.2014.The Effect of Differentiating Instruction using Multiple Intelligences on Improving Reading Comprehension of 5th Graders with Learning Disabilities. *Psycho-Educational Research Reviews*, 3(2), 12–20. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/354>
2. Banna, A. E. S. 2019. The Effects of Multiple Intelligences Training Program on Improving Reading Comprehension Skills of Reading of the Disabled Primary Six Students. *Psycho-Educational Research Reviews*, 8(1), 64–69. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/194>
3. Blake, R. (2013). *Brave new digital classroom : Technology and foreign language learning* (2nd ed.). Washington, DC: Georgetown University Press.
4. Boelens, R., M. Voet and B. D. Wever .2018.The design of blended learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended learning', *Computers & Education* 120: 197–212. <https://doi.org/10.1016/j.compedu.2018.02.009>.
5. Cantor, P., Osher, D., Berg, J., Steyer, L., & Rose, T. 2018. Malleability, plasticity, and individuality: How children learn and develop in context. *Applied Developmental Science*, 1. doi:10.1080/10888691.2017.1398649
6. Çoban, C. & Yazıcı, D. 2022. Examining Peer Relationships in Transition to Primary School in the Pandemic Process with Teacher and Parent Opinions. *Psycho-Educational Research Reviews*, 11(1), 31–45. https://doi.org/10.52963/PERR_Biruni_V11.N1.03
7. de Graaf, A., H. Westbroek and F. Janssen.2018.A practical approach to differentiated instruction: How biology teachers redesigned their genetics and ecology lessons', *Journal of Science Teacher Education* 30, no. 1: 6–23. 10.1080/1046560X.2018.1523646.
8. Demir, F.& İlhan, E.2022. Students' Self-Directed Online Learning Skills in Distance Higher Education: Students' Voice and Faculty Members' Supports . *Psycho-Educational Research Reviews*, 11(1), 174–193. https://doi.org/10.52963/PERR_Biruni_V11.N1.11
9. Dixon, F. A., Yssel, N., McConnell, J., & Hardin, T. (2014). Differentiated Instruction Professional Development and Teacher Efficacy. *Journal of the Education of Gifted*, 37(2), 11-127. <https://doi.org/10.1177/0162353214529042>
10. Eissa , M. & Sayed, A.2012. The Raven's Colored Progressive Matrices Test: A normative Data for Gifted Students in Egypt Aged 10-17. *Psycho-Educational Research Reviews*, 1(1), 86–92. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/403>
11. Eissa, M. & Mostafa, A.2013. The Effects of Differentiated Instruction by Integrating Multiple Intelligences and Learning Styles on Solving Problems, Achievement In, and Attitudes Towards Math in Six Graders with Learning Disabilities in Cooperative Groups. *Psycho-Educational Research Reviews*, 2(2), 31–43. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/379>
12. Garba, A. A., & Muhammad, S. A. (2015). The effectiveness of differentiated instruction on students' geometric achievement in Kebbi state senior secondary schools, Nigeria. *International Journal of Scientific & Engineering Research*, 6(1). ISSN 2229-5518 Retrieved from IJSER © 2015 <http://www.ijser.org> .

13. Gomaa, O.2014. The Effect of Differentiating Instruction Using Multiple Intelligences on Achievement in and Attitudes towards Science in Middle School Students with Learning Disabilities. *Psycho-Educational Research Reviews*, 3(3), 110–118. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/351>
14. Hertberg-Davis, H. (2009). Myth 7: Differentiation in the regular classroom is equivalent to gifted programs and is sufficient: Classroom teachers have the time, the skill, and the will to differentiate adequately. *Gifted Child Quarterly*, 53, 251-253. <https://doi.org/10.1177/0016986209346927>
15. Huseini, H. & Abdullah, R. 2014. Effectiveness of Differentiated Instruction on Achievement in Mathematics of Middle School Students with learning disabilities. *Psycho-Educational Research Reviews*, 3(1), 29–34. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/365>
16. Islam, M. S.2019. Bangladeshi University Students' Perception about Using Google Classroom for Teaching English. *Psycho-Educational Research Reviews*, 8(2), 57 –. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/160>
17. Ismajli, H., & Imami-Morina, I. 2018. Differentiated Instruction: Understanding and Applying Interactive Strategies to Meet the Needs of All the Students. *International Journal of Instruction*, 11(3), 207-218. <https://doi.org/10.12973/iji.2018.11315a>
18. Kamarulzaman, M.H.; Azman, H.; Mohd Zahidi, A.; Md Yunus, M. 2021.The Practice of Online Differentiated Instruction and Its Impact on Motivation and Academic Performance in the Wake of Covid-19. Preprints, 2021060028 (doi: 10.20944/preprints202106.0028.v1).
19. Kayaalp, F., Meral, E., & Başcı Namlı, Z. 2021. I Wrote, I Was Evaluated, and I Learned an Alternative Teaching Process in Distance Education: Writing-to-Learn. *Psycho-Educational Research Reviews*, 10(3), 96–124. https://doi.org/10.52963/PERR_Biruni_V10.N3.07
20. Kurtdede, N. & Yıldırım, N. 2022. Teacher Education in Turkey in the Covid-19 Pandemic: Experiences of the Pre-Service Teachers about the Online Teaching Practice . *Psycho-Educational Research Reviews*, 11(1), 77–92. https://doi.org/10.52963/PERR_Biruni_V11.N1.06
21. Leticia F., Sara B., Feliciano H.2015. Gifted amongst Preschool Children: An Analysis on How Teachers Recognize Giftedness. *International Journal of Technology and Inclusive Education (IJTIE)*, Special Issue, 1, (2), 698- 706. DOI:10.20533/ijtie.2047.0533.2015.0090
22. Li, J.2021. The Impact of a Four-Station Blended Learning Model of Differentiating Instruction on Student Engagement in a Middle School Chinese I Class in a Southeastern State. (Doctoral dissertation). Retrieved from <https://scholarcommons.sc.edu/etd/6518>
23. Maddox, C. (2015). Elementary (K-5) teachers' perceptions of differentiated instruction. (Doctoral Dissertation). Available from Walden University. <https://scholarworks.waldenu.edu/dissertations/324>
24. Onyishi, C.& Sefotho, M.2020. Teachers' Perspectives on the Use of Differentiated Instruction in Inclusive Classrooms: Implication for Teacher Education. *International Journal of*

- Higher Education,9(6): 136-150.
<http://ijhe.sciedupress.com>
25. Osher, D., Cantor, P., Berg, J., Steyer, L., & Rose, T.2018. Drivers of human development: How relationships and context shape learning and development. *Applied Developmental Science*, 1. DOI: 10.1080/10888691.2017.1398650
26. Pfeiffer, S. I. (2012). Current perspectives on the identification and assessment of gifted students. *Journal of Psychoeducational Assessment*, 30(1), 3–9.
<https://doi.org/10.1177/0734282911428192>
27. Shareef, K.2018. Differentiated Instruction Revisited: An Effective Way to respond to the Needs of Gifted and Talented Students. *International Journal of Educational Investigations*, 5(6): 16-22
28. Shareefa, M., Moosa, V., Zin, R. M., Abdullah, N. Z. M., & Jawawi, R. (2019). Teachers’ Perceptions on Differentiated Instruction: Do Experience, Qualification and Challenges Matter? *International Journal of Learning, Teaching and Educational Research*, 18(8), 214–226.
<https://doi.org/10.26803/ijlter.18.8.13>
29. Blake, R. (2013). *Brave new digital classroom : Technology and foreign language learning* (2nd ed.). Washington, DC: Georgetown University Press.
30. Taner, A., Akyıldız, S., Gülay, A., & Özdemir, C. 2021. Investigating Education Faculty Students’ Views about Asynchronous Distance Education Practices during Covid-19 Isolation Period. *Psycho-Educational Research Reviews*, 10(1), 34–45. Retrieved from <https://www.perrjournal.com/index.php/perrjournal/article/view/90>
31. Ulaş, S. D., Kurt, H. İbrahim, Bayındır, S. ., Cihan, Özgül ., Vural, Ömer F., & Başaran, M. 2021. Teachers’ Metaphoric Perceptions of Covid-19 and School in the Process of Covid-19. *Psycho-Educational Research Reviews*, 10(3), 393–410.
https://doi.org/10.52963/PERR_Biruni_V10.N3.25
32. Yao, C. (2019). A case study of Chinese adult learners’ English acquisition in a blended learning environment. *Australian Journal of Adult Learning*, 59(1), 115-135.
33. Yakar, A.2021. How Responsible Are Turkish Secondary School Students for Distance Learning During the Covid-19 Pandemic: A Scale Development and Implementation Study. *Psycho-Educational Research Reviews*, 10(3), 377–392.
https://doi.org/10.52963/PERR_Biruni_V10.N3.24
34. Yazıcı, H., Altun, F., Tosun, C., Özdemir, M., & Karsantık, Y. 2021. Psychometric Evaluation of the Turkish Version of the Covid-19 Induced Anxiety Scale and Protective Behaviors Towards Covid-19 Scale. *Psycho-Educational Research Reviews*, 10(3), 478–489.
https://doi.org/10.52963/PERR_Biruni_V10.N3.30
35. Zens, A.2021.The Impact of Differentiated Learning Activities on Student Engagement and Motivation in the English Language Arts Classroom. *Dissertations, Theses, and Projects*. 611. <https://red.mnstate.edu/thesis/611>