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The Impact of HABA Technique on Students' Performance and Students' Learning Time (SLT) Using Online Approach

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Abstract

The HABA technique is a technique used specifically to address the adjustment for accrual basis accounting introduced by Sulaiman and Adam in 2019. But this technique has never been implemented for virtual teaching and learning purposes before. Then, the suitability of the technique to be used during the pandemic Covid-19 academic calendar is still in question. Therefore, this study was conducted to determine the relationship between the implementation of the HABA technique via online classes towards students' performance and Student Learning Time (SLT) on an accrual basis adjustment. This study adopts bivariate regression to assess the relationship of the variables and is supported with descriptive statistics which are mean, median, and standard deviation. The sample of the study was students from the first semester of the diploma in accountancy of Polytechnic Mukah for two consecutive academic sessions which are sessions 2020 and 2021. This study finds that the HABA technique via online classes can positively influence students' performance on the accrual adjustment. Besides, this technique is also able to inversely influence the SLT of the students to study on the accrual basis adjustment. Based on this study, students that have been taught the technique have portrayed better results as compared to other students. In fact, they are also able to shorten their study time to study this respective topic. This led to a positive impact on students' academic achievement for this course. In conclusion, this technique is suitable to be adapted to both physical and virtual teaching and learning approaches.

Keywords: - Accrual basis, adjustment, HABA

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1. Introduction

During the pandemic Covid-19, all teaching and learning has been shifted from a face-to-face approach to online teaching. These changes were not only for primary and secondary school but also to tertiary level including polytechnics. Polytechnics is one of the public higher education institutions in Malaysia that niche on technical and vocational education (TVET). Among the courses offered in Polytechnics was the Diploma in Accountancy which requires 3 years to complete the course.

Based on the admission entry data for semester 1 from the June 2020 intake of Polytechnics Mukah, Sarawak, it shows that 85% of accounting students do not have any accounting background during their SPM level. Due to this, the course lecturer has decided to expand the use of the HABA technique in accrual accounting adjustment to be used during online classes. HABA technique has been created and introduced by Sulaiman and Adam in 2019 as a technique to help students in solving the accrual basis adjustment. According to Sulaiman & Adam (2020), this technique can contribute to students' performance, especially in basic accounting courses among first-semester students in preparing the financial statement with adjustments. But this technique has never been used for online classes yet. Therefore, this study tries to fill the

gap in the implementation of this technique via virtual class.

Then this research was conducted to determine the relationship between the effectiveness of the HABA technique and students' performance during online class implementation for accrual basis adjustment. Besides, it also means to determine the relationship between the effectiveness of the HABA technique in reducing the student learning time (SLT) for accrual basis adjustment topics. With these two objectives, it is hoped that the research can contribute to the new approach to learning and teaching basic accounting courses under new norms.

1.1 Problem Statement

DPA10013 Financial Accounting 1 is a core disciplined subjects for first-semester accounting students for a diploma in accountancy for Polytechnic Malaysia. One of the topics included in the syllabus is the preparation of financial statements with adjustments. This topic is a combination of two topics which are adjustment and financial statements. Financial statements with adjustment were the most difficult topic for the student to understand. (Sulaiman & Adam, 2020). This argument also aligned with Ahn & Jacobs (2019) where accrual accounting required good knowledge and technical skills to it because it is hard and difficult to perform.

Due to the spread of the Covid-19 pandemic, the education system has shifted the paradigm from traditional learning to the online learning approach. This has created a negative perception among the students on the effectiveness of online classes due to their readiness for it. This is aligned with a study by Butnaru et al. (2021) whereby there is a negative relationship between students' perception on the effectiveness of face-to-face classes compared to online classes. In addition, students also felt that it was hard for them to gain and process the input from teachers because the online class was not attractive and effective for them. This argument is consistent with a study by Annamalai (2021), where students have been passively receiving knowledge because online teaching delivery was boring since only the teacher is explaining.

Taking these three main issues together, the researchers felt that it would be a great challenge for the accounting lecturer to deliver the accrual basis adjustment via online classes and at the same time to make it attractive for the students to learn.

1.2 Research Objectives

This research is conducted with two main objectives which are:

1. To determine the relationship between the effectiveness of the HABA technique through online classes in improving students' performance on accrual basis adjustment.
2. To determine the relationship between the effectiveness of the HABA technique via online classes in reducing Student Learning Time (SLT) for accrual basis adjustment.

2. Methodology

Accounting can be split into two bases known as cash basis and accrual basis. According to Malau et al. (2022), cash basis happens to be when revenue and expenses was recognized when it is received or paid. On the other hand, the accrual basis takes place whenever revenue is recognised when it is earned and expenses when it is incurred. In normal business practices, business organizations use an accrual accounting basis rather than a cash basis for their financial business activities. The reason is supported by Haykal et al. (2020) where an accrual basis has a better approach to analyzing the company's actual performance.

In addition, Ball & Nikolaev (2021) pointed out that, principally, the financial statement prepared under a cash basis was not so informative as compared to the financial statement prepared under an accrual basis. It is because, referring to Khair et al. (2020), the cash basis is different from the accrual basis in terms of reporting its assets and liabilities and different in how the recognition of its revenue and expenses is done. Besides, the quality of information conveyed and its accountability on a cash basis is not good as compared to an accrual basis (Mbelwa, Adhikari, & Shahadat, 2019). It also aligned with Poljašević et al. (2019) where an accrual basis can provide a basis for a better measure of sustainable fiscal policy as compared to a cash basis.

Although an accrual basis is preferable it is difficult to understand and implement in practice. Referring to Lubis et al. (2021), even though the information from accrual accounting provides measurable for business performance but it is hard to prepare clear information. It is because the construction of the accrual basis is too complicated, and its complexity covers many aspects. In addition, Poljašević et al. (2019) also added that the implementation of the accrual basis in some European countries still faces many uncertainties. Based on Sellami & Gafsi (2019), adequate and proper training programs that focus on the development of professional skills and expertise of practitioners on the basic need to be done. It is because the accrual basis was too sophisticated even though it was high in quality.

The difficulties are not only faced by professional practitioners but also by tertiary-level students. Based on Sulaiman & Adam (2020) study, accrual basis adjustment was found to be the hardest topic to possess. This finding is consistent with Gigli et al. (2018), where the lack of students' ability to integrate and coordinate the fundamental ideas with accounting equations has worsened their understandability on the accrual basis.

This situation gets worse when the teaching and learning method has shifted to a remote approach. Based on Chandra (2020), students have academic stress due to the current pandemic scenario. In addition, referring to Kulal & Nayak (2020), 82.4% of the students feel that the online classes were not effective as compared to the traditional classroom method. It is because most students are unable to grasp the knowledge via online learning

systems.

As an educator, lecturers also play vital roles where they need to know and possess the subject matter, teaching skills and integrate it with values. (Hassan, Zailaini, & Darussalam, 2020). According to Suhairi & Ahmad (2017), the teacher's understanding on subject matter influenced the student in classroom performance. In addition, according to Indrani et al. (2018), teacher must ensure that the students are able to acquire the knowledge.

3. Methodology

This study used bivariate regression that specifically adapts logistics regression where it only used one independent variable to test the individual dependent variable. The model adopted is as follows:

$$y = \beta_1 X_1 + \alpha + \varepsilon \quad (1)$$

3.1 Research Population and Sampling

This study was be conducted on first-semester accounting students from Polytechnic Mukah, Sarawak from two consecutive academic sessions which are session December 2020 and Session 1: 2021/2022, where later in this study will be called Session 2020 for December 2020 and Session 2021 for Session 1: 2021/2022. For session 2020, it consists of 64 students from two different classes, which are DAT1A and DAT1B. Whereas for session 2021 it consists of 67 students that have also been split into two classes which are DAT1A and DAT1B respectively. As for the research controlling variable, DAT1A from both sessions was selected to use the HABA technique, and the other group did not.

3.2 Research Hypothesis

The hypothesis of this study is as follows:

H_1: There is a positive relationship between the use of the HABA technique during online classes and students' performance on accrual basis adjustment.

H_2: There is a negative relationship between the use of the HABA technique during online classes and Student Learning Time (SLT) for accrual basis adjustment.

3.3 Research Design

To examine the effectiveness of the technique on students' performance for accrual basis adjustment through online classes, students' performance on Test 2 and *Penilaian Alternatif* (PAlt) were used to see the differences in both groups. Meanwhile, to examine the effectiveness of the technique during online classes on reducing Student Learning Time (SLT) for accrual basis adjustment, the questionnaire has been distributed to the students and the result was analyzed using a descriptive statistical method. This study also uses mean, median and standard deviation as a tool for comparison of the data. Referring to Sulaiman & Adam (2020), the following are steps on how to derive the technique:

i. Draft a table that consists of 2 columns and 3 rows.

ii. Label the first row on the left column with the notation "CA" and "CL" for the first row on the right column.

CA	CL

iii. Label the second row with the notation of "HA" and "BA" respectively.

CA	CL
HA	BA

iv. For the final row, bring down "B" and "H" diagonally from the second row.

CA	CL
HA	BA
B	H

v. Finally, add the letter "D" at the back of letter "B" and "H" respectively. Then, the HABA table will appear as in Table 1.

Table 1. Technique to derive HABA table

CA	CL
HA	BA
BD	HD

Legend:
CA: Current Asset
CL: Current Liability
HA: *Hasil Akru* (Accrued Revenue)
BA: *Belanja Akru* (Accrued Expenses)
BD: *Belanja Dahulu* (Prepaid Expenses)
HD: *Hasil Dahulu* (Prepaid Revenue)

vi. After the calculation for the adjustment transaction has been done, students need to categorise whether it *is Hasil* "H" (revenue) or *Belanja* "B" (expenses). Students are also required to identify whether the transaction is *Akru* "A" (accrued) or *Dahulu* "D" (prepaid).

vii. Then, the combination of the two letters need to be done whether it is HA, BA, BD or HD.

viii. Finally, students need to refer to the account classification on the first row whether it falls under CA or CL.

4. Finding and Analysis

Table 2 and Table 3 below show the statistical result of the logistics regression analysis on students' performance for Test 2 and PAlt for 2020 and 2021 academic sessions.

Table 2. Statistical logistics regression analysis result for academic performance 2020 academic session

Assessment	Test 2		PAlt	
Class	DAT1A	DAT1B	DAT1A	DAT1B
p-value	**0.00082***		**0.02024****	
Coefficient	**0.22572**		**0.19297**	
Intercept	**0.31156**		**0.39686**	
Mean	54	31	59	40
Median	53	26	76	39
Std. Deviation	31.7	17.8	34	30.7

Table 3. Statistical logistics regression analysis result for academic performance 2021 academic session

Assessment	Test 2		PAlt	
Class	DAT1A	DAT1B	DAT1A	DAT1B
p-value	**0.05087****		**0.00336***	
Coefficient	**0.13415**		**0.23999**	
Intercept	**0.3942**		**0.39947**	
Mean	52.84	39.42	63.95	39.95
Median	60.60	33.00	76.40	32.00
Std. Deviation	31.68	22.21	33.06	31.30

*Note: * Significance at the level of .01*
*** Significance at the level of .05*

Based on Table 2, the *p*-value for Test 2 and PAlt for the 2020 academic session was significant at 1% and 5% respectively. It also has a positive coefficient which is 0.22572 and 0.19297 for both assessments that reflect the slope of the regression. Whereas, Table 3 shows the *p*-value for Test 2 was significant at 5% with a slope of 0.13415 and the *p*-value for PAlt that significant at 1% with a slope of 0.23999.

Then, it is proven that the implementation of the HABA technique has a positive relationship with students' performance on an accrual basis adjustment using an online teaching approach.

It has also been supported by the mean value of DAT1A which uses the technique that has a much higher value compared to DAT1B that do not use the HABA technique. Besides, the standard deviation that reflects the dispersion of the result also shows that DAT1A has a more consistent standard deviation as compared to DAT1B whereby for the 2020 academic session, DAT1A only increased by 2.3% whereas DAT1B increased by 12.9%.

On the other hand, the standard deviation for the 2021 academic session also reflects the same pattern where DAT1A increased only by 1.38% but DAT1B increased by 9.09%. Therefore, the H_0 hypothesis is rejected.

Next, Table 3 shows the result of the analysis of the relationship between the use of the HABA technique with SLT.

Table 3: Statistical logistics regression analysis result on Student Learning Time (SLT) for the 2020 and 2021 academic session

Session	SLT (2020)		SLT (2021)	
Class	DAT1A	DAT1B	DAT1A	DAT1B
p-value	**0.00970***		**0.00056****	
Coefficient	**-2.78125**		**-3.15714**	
Intercept	**9.21875**		**10.500**	
Mean	6.44	9.22	7.34	10.50
Median	5.00	7.00	7.00	9.50
Std. Deviation	2.91	5.13	3.06	4.03

The *p*-value for both academic sessions was significant at 1% respectively. Both session also has a negative slope which is -2.7815 and -3.15714. Then, it is proven that the implementation of the technique is able to reduce Student Learning Time (SLT) to study on the accrual basis adjustment.

In addition, it is also consistent with the other descriptive statistic result. For the mean value, DAT1A shows a lower value of hours studied compared to DAT1B for both academic sessions which is 6.44 and 7.34 hours compared to DAT1B which is 9.22 and 10.5 hours respectively.

Lastly for standard deviation, DAT1A which used the HABA technique shows more consistent results which only increase by 0.15% whereas DAT1B that do not use the technique decreased by 1.1%. Therefore, the H_0 hypothesis was also rejected.

5. Conclusion

Based on the result it is proven that the HABA technique is not only suitable to be used during physical teaching classes but also suitable for virtual classes. The data shows that there is a positive relationship between the use of the HABA technique and students' performance where the more students are introduced to the technique, the better their results for accrual basis adjustment. This concurs to the study by Januszewski & Sugajska (2022) where education via online on Managerial Accounting has effectively and positively able to enhance students' performance.

Furthermore, the result also supports the hypothesis where HABA technique is able to reduce the Student Learning Time (SLT) for accrual basis adjustment where the more students are introduced to the technique, the lesser the time taken for the students to study accrual basis adjustment effectively. This result concurs with finding from Muthuprasad, Aiswarya, Aditya & Jha (2021) where virtual class through online approach open up the opportunity for students to learn based on their own pace more conveniently and effectively. Therefore, it is concluded that the HABA technique is one of the teaching delivery methods that is also effective to be used for online classes, especially for accrual basis adjustment.

References

Ahn, P. D., & Jacobs, K. (2019). Beyond the accounting profession: A professionalisation project in the South Korean public sector accounting field. *Accounting, Auditing & Accountability Journal*, *32*(1), 101-132.

Annamalai, N. (2021). Online learning during COVID-19 Pandemic. Are Malaysian high school students ready?. *Pertanika Journal of Social Sciences & Humanities*, *29*(3). https://doi.org/10.47836/pjssh.29.3.06.

Ball, R., & Nikolaev, V. V. (2021). On earnings and cash flows as predictors of future cash flows. *Journal of Accounting and Economics*, *73*(1), 101430. https://doi.org/10.1016/j.jacceco.2021.101430.

Butnaru, G. I., Niță, V., Anichiti, A., & Brînză, G. (2021). The Effectiveness of Online Education during Covid 19 Pandemic—A Comparative Analysis between the Perceptions of Academic Students and High School Students from Romania. *Sustainability*, *13*(9), 5311. https://doi.org/10.3390/su13095311.

Chandra, Y. (2020). Online education during COVID-19: perception of academic stress and emotional intelligence coping strategies among college students. *Asian Education and Development Studies*, *10*(2), 229–238. https://doi.org/10.1108/aeds-05-2020-0097.

Gigli, S., Mariani, L. H., & Trivellato, B. (2018). Assimilating accounting innovations: lessons from Italian public universities. *Journal of Accounting & Organizational Change*, *14*(4), 381–401. https://doi.org/10.1108/jaoc-10-2017-0101.

Hassan, A. B., Zailaini, M. A., & Darusssalam, G. (2020). Pelaksanaan Kurikulum Dipelajari Dan Pembelajaran Pendidikan Islam Di Sebuah Kolej Pengajian Islam Selatan Thailand. *Journal of Issue In Education*, *43*, 1-11.

Haykal, M., Erlina, E., Maksum, A., & Muda, I. (2020). Profitability and Discretionary Accrual through Supply Chain Management: Evidence of Manufacturing Firms using GMM Estimates in Indonesia. *International Journal of Supply Chain Management.*

Indrani, Shashikala, A., Chrisia, P. L., & Janaki, A. (2018). *Knowledge and curriculum (Perspective in education)*. Mangalore: Mangalore University.

Januszewski, A, & Sugajska, N, B. (2022) Online Managerial Accounting education during the COVID-19 pandemic: A case study from Poland. *Procedia Computer Science*, *207*, 215-226.

Khair, P. A., & Bangun, V. S. (2020). Accrual-Based Public Accounting Standard In Indonesia Presentation Of Financial Statements of General Service Agency. *Turkish Online Journal of Qualitative Inquiry*, *11*(4), 1025-1029.

Kulal, A., & Nayak, A. (2020). A study on perception of teachers and students toward online classes in Dakshina Kannada and Udupi District. *Asian Association of Open Universities Journal*, *15*(3), 285-296. https://doi.org/10.1108/aaouj-07-2020-0047.

Lubis, P. K. D., Lubis, I., Muda, I., & Nedelea, A. (2021). Management Process Administration in Enterprise Resources Planning (ERP) Systems Applications and Products in Data Processing (SAP) in PTPN III SEI Dadap. *Ecoforum Journal*, *10*(3).

Malau, A., Teguh, M., & Muda, I. (2022). The Accrual Basis of Accounting and The Reasons for Adjusting Entries. *Journal of Positive School Psychology*, *6*(3), 2401-2404.

Mbelwa, L. H., Adhikari, P., & Shahadat, K. (2019). Investigation of the institutional and decision-usefulness factors in the implementation of accrual accounting reforms in the public sector of Tanzania. *Journal of Accounting in Emerging Economies*, *9*(3), 335-365. https://doi.org/10.1108/jaee-01-2018-0005.

Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Jha, G. K. (2021). Students' perception and preference for online education in India during COVID-19 pandemic. *Social sciences & humanities open*, *3*(1), 100101. https://doi.org/10.1016/j.ssaho.2020.100101.

Poljašević, J., Vašiček, V., & Jovanović, T. (2019). Comparative review of dual reporting in public sector in three south-east European countries. *Journal of Public Budgeting, Accounting & Financial Management*, *31*(3), 325-344. https://doi.org/10.1108/jpbafm-02-2019-0035.

Sellami, Y. M., & Gafsi, Y. (2020). Public management systems, accounting education, and compliance with international public sector accounting standards in sub-Saharan Africa. *International Journal of Public Sector Management*, *33*(2/3), 141-164. https://doi.org/10.1108/ijpsm-12-2018-0274.

Suhairi, M. H. M., & Ahmad, A. (2017, April). Pengaruh pengetahuan isi kandungan terhadap aplikasi pengajaran yang berkesan dalam kalangan guru-guru sejarah. In *International Conference on Global Education V,'Global Education, Common Wealth, and Cultural Diversity'. Universitas Ekasakti, Padang* (pp. 10-11).

Sulaiman, S. E. B., & Adam, A. J. B. (2020). A Case Study on Polytechnic Mukah towards the Effectiveness of "HABA" Technique in Accrual Accounting Adjustment. *Jurnal Sains Sosial dan Pendidikan Teknikal| Journal of Social Sciences and Technical Education (JoSSTEd)*, *1*(1), 1-10.