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Enhancing Accounting Education: Evaluating Effective Teaching Methods for Depreciation and the Theory of Consistency

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Abstract

This illustrative study examined depreciation methods of straight-line, accelerated, units of production (activity), and sum-of-digits methods of depreciation under U.S. Generally Accepted Accounting Principles (GAAP). The study employed a combination of pedagogical approaches, including lectures, practical examples, interactive learning, and problem-solving to enhance student comprehension. The results suggest that active engagement strategies help students recall information and think critically. The straight-line technique is easier than the accelerated method since it spreads out the depreciation costs evenly over the life of the depreciable asset. The accelerated method, on the other hand, shows a higher depreciation expense in the early years of the asset, thus lowering the company's taxable income. The accumulated depreciation using the units of production (activity) method depends on the use of the assets from period to period.

Keywords: Depreciation methods, straight-line, accelerated, units of production, net income, accounting theory of consistency, effective teaching methods

1. Introduction

Accounting education is important to students' comprehension levels of accounting concepts and practices (Apostolou et al., 2017). Accumulated depreciation increases when depreciation expense is recorded periodically, which directly affects both financial and tax income, and it also enhances management decision-making (Schroeder, Clark, & Cathey, 2022). The use of depreciation methods impacts both financial statement presentation and strategic considerations regarding budgeting, asset management, and taxation (Kieso, Weygandt, & Warfield, 2020). Straight-line, accelerated, and units of production methods provide different depreciation amounts over the life of a long-term asset (Horngren, Sundem, & Elliott, 2019). According to Needles, Powers, and Crosson (2020), each of these depreciation methods may create temporal or permanent differences between tax and book income.

The research investigates conventional and interactive pedagogical methods to illustrate how active learning may improve understanding, critical analysis, and decision-making (Prince, 2004). The notion of depreciation is intrinsically linked to the concept of consistency in accounting. This implies that consistent use of depreciation method provides comparability in financial reporting (FASB, 2018). Failure to use consistent application of a depreciation method may result in inaccurate depreciation expenses, accumulated depreciation, and the carrying value of a depreciable asset (Gaa, 2021).

Accounting instructors need to engage students on how to apply depreciation strategies in real-life situations and explain how they work. Students need to remember what they study and learn how to think critically and understand concepts and practices that they have learned.

Students need to know more than only how to utilize computers in today's fast-paced business sector (AACSB, 2020). Accounting instructors may strategize the best methods to use when computing depreciation on a fixed asset (Apostolou et al., 2017). The research looks at both traditional and interactive teaching methods to show how active learning may help students comprehend accounting lectures, chapter exercises and problems on the depreciation method to use on a fixed asset (Prince, 2004). Last, the goal of this research is to provide individuals with the knowledge that can improve their knowledge in accounting for depreciation expense and how it affects financial reporting and the performance of a business.

2. Literature Review

2.2. Foundations of Depreciation in Financial Reporting

Depreciation is a way to keep track of how physical assets are used and to ensure that revenue and expenses are as near to each other as they can be (Kieso, Weygandt, & Warfield, 2020; Schroeder, Clark, & Cathey, 2022). Depreciation serves as the most effective method to illustrate the anticipated benefits on the use of a fixed asset (FASB, 2014; IASB, 2023). Most intermediate and financial accounting textbooks the use of the type of depreciation is a question of judgment and that it is limited by how effectively and how consistent it is used (Horngren, Sundem, & Elliott, 2019; Needles, Powers, & Crosson, 2020).

Investors and analysts frequently assess a company’s write-downs on fixed assets to provide a clearer understanding of returns on the use of these assets. For example, a firm that uses accelerated depreciation method would not have to pay as much tax on its revenue in the earlier years of the asset’s life. This might influence the amount of reported net income a company has, and it also provides future strategic decisions (Higgins, 2021; White, Sondhi, & Fried, 2022). The way depreciation is calculated may also affect important financial indicators, such as financial ratios.

2.2. The Straight-Line Depreciation Method

The simplest and the most widely used method of accounting for depreciation expense is straight-line, and it provides constant depreciation expense over the life of a depreciable asset. Depreciable cost for the straight-line method is the historical cost of the asset minus salvage value, which is later divided by the number of years to determine depreciation expense. This method is straightforward to apply and promotes consistency in financial reporting, since it results in equal depreciation charges each year (Kieso, Weygandt, & Warfield, 2020). Because of this uniform allocation, companies benefit from stable expense recognition, which simplifies long-term planning and facilitates meaningful comparisons across reporting periods.

Straight-line depreciation produces consistent annual expense charges, leading to stable profit reporting (Needles, Powers, & Crosson, 2013). This predictability can be advantageous for investors who prefer steady and comparable financial results. However, a limitation of this method is that it may not reflect the actual economic usefulness of the asset over time. Assets often generate more economic benefit in their early years and less in later years, meaning that straight-line depreciation could overstate profitability in the beginning and understate it in the later years (Kieso et al., 2020).

2.3. Accelerated Depreciation Method

Accelerated depreciation costs more than the straight-line method and affects net income in the early years of the asset. However, it costs less and makes more money in the years that follow. Front-loading depreciation may be beneficial for tax purposes since it reduces taxable income during the early years of ownership. But it could also make it tougher for investors to compare performance from one period to the other (Needles, Powers, & Crosson, 2013). The double-declining balance (DDB) is a form of accelerated depreciation that charges more depreciation expense in the early years of the life of a fixed asset. The concept behind these techniques is that many considerations can be taken for the asset to be more useful or it could lose value faster when they are even new**.**

2.4. Sum-of-the-Years'-Digits

The SYD approach is a way to speed up depreciation by giving larger depreciation costs in the first few years of an asset's useful life and lower costs in subsequent years. This strategy is based on the idea that a fixed asset earns more revenue during the first years and then becomes less useful over time (Kieso, Weygandt, & Warfield, 2020). The SYD technique, on the other hand, creates a pattern of depreciation charges that becomes smaller over time. SYD is not used as much as straight-line, but it strikes a satisfactory balance between being easy to understand and showing how assets are really employed.

In accounting, SYD depreciation affects reported net income in the first few years of an asset's life since expenditures are higher during this period. But this effect might aid firms by lowering their taxable income in the short term, which could enhance their cash flow (Weygandt et al., 2020). SYD helps businesses make decisions about quickly depreciating assets like cars and machinery. It also performs a better job of aligning expenditures with revenues in organizations whose assets produce more money early on (Garrison et al., 2021).

2.5. Units of Production Method

The units-of-production depreciation method charges an asset's depreciable cost (cost minus salvage value) to expense based on actual usage, for example, units produced, hours operated, or miles driven. This approach matches expense with the asset's economic output: more depreciation is recorded in periods of heavier use and less in periods of light use, making it well suited to manufacturing equipment whose wear is closely tied to activity (Kieso, Weygandt, & Warfield, 2020). A key benefit is improved matching costs with revenue; a drawback is the requirement for a reliable estimate of total lifetime usage, since errors in that estimate will distort the per-unit charge (Needles, Powers, & Crosson, 2013).

2.6. Net Income and Taxation Effects of Method Choice

The recording expenses influences net income profiles, particularly in the first few years (Kieso et al., 2020; Schroeder et al., 2022). When income tax is factored into depreciation, accelerated depreciation method is the best approach to use. The depreciation method of SL provides constant depreciation expense over the life of the asset. incomes more equal (Needles et al., 2020). When consumption is the main driver, units of production connect costs to activities, which makes it easier to align expenses with revenues (Horngren et al., 2019). Apostolou, Dorminey, Hassell, and Rebele (2017) remark that students often look at the same asset data in numerous ways to observe these differences in cash-tax timing and revenue.

The way a company works affects its overall financial health, such as its net income, how it manages its cash flow, and its choices about where to put its money. Initially, businesses that transition to faster processes may not earn as much money. Their actions might change how investors feel about them and how their stock values change (Miller & Modigliani, 1961). Stakeholders may be able to make better decisions if they know these minor things. People can examine and comprehend financial information better this way (Gaa, 2021).

2.7. Theory of Consistency and Changes in Method

The key idea underlying consistency is that accounting standards should stay the same throughout time so that it is easier to compare them. It is crucial to document the optimal selection (FASB, 2014; IASB, 2023). Depending on the method used, the way depreciation was computed was different. These changes will be implemented in the future for obvious reasons that follow both GAAP and IFRS (ASC 250; IAS 8) (FASB, 2014; IASB, 2023). Research on governance indicates that consistent execution correlates with stakeholder trust and cultures of ethical reporting (Gaa, 2021). Accounting consistency makes it easier to compare financial statements and keeps the process of reporting finances honest (Schroeder et al., 2022).

2.8. Conceptual Understanding, Cognitive Load, and Misconceptions

Students typically learn to understand class instructions to successfully complete their course assignments (Apostolou et al., 2017). Learning theory asserts that the management of both intrinsic and extrinsic cognitive load via practical examples, incremental scaffolding, and diverse representations facilitates conceptual transfer in areas such as depreciation schedules and book-tax discrepancies (Mayer, 2009). Constructive alignment, which links learning objectives, tasks, and assessments, enables students to transcend rote memorization, fostering comprehension and application for decision-making (Biggs & Tang, 2011).

In accounting courses, it is very crucial to address cognitive load since students may not be able to grasp complicated concepts (Sweller, 1988). Accounting educators may be able to help pupils understand and remember what they learn better by making them perform less additional mental effort. This approach will help them understand and apply depreciation strategies better (Paas & Van Merriënboer, 1994). This method not only teaches students how to do things technically, but it also teaches them how to think critically, which is highly crucial for their future jobs in accounting (Apostolou et al., 2017).

2.9. Active Learning and Problem-Based Approaches in Accounting

Active learning strategies, including think-pair-share, problem-based learning, and minute papers, improve performance in STEM and business disciplines (Prince, 2004; Freeman et al., 2014). Cooperative learning and structured peer explanation improve the retention of technical methodologies and the understanding of economic ramifications in accounting education (Ballantine & Larres, 2007; Apostolou et al., 2017). Active learning helps students connect with the material on a deeper level by putting them in real-life settings where they can use what they have learned (Freeman et al., 2014). When people work together to solve problems, they also learn to see things from diverse points of view. This makes them more creative and better at thinking critically when they are looking for answers (Johnson & Johnson, 1994). Students gain key skills for their future professions in accounting, like how to collaborate with others, relate to others, and think critically, as they confront these tough situations (Ballantine & Larres, 2007).

2.10. Case-Based and Simulation-Based Learning for Depreciation

Cases and simulations help you choose a technique by putting it in perspective, such as contrasting capital-intensive manufacturing with a service organization that has assets that are used. Students may observe how income, taxes, and key performance measures change over time using this (Apostolou et al., 2017). Kolb's experiential frameworks say that physical experience, reflective observation, abstract conceptualization, and active experimentation constitute a cycle that simulations might imitate when students make timetables, look at ratios, and explain their methodological choices (Kolb, 2015). Simulations assist individuals in recalling what they learned about hard accounting issues with a lot of stages and make them more motivated (Ravenscroft & Buckless, 1992).

Case-based learning also helps students cope with ambiguity and uncertainty, which are genuine difficulties in accounting (Boud & Feletti, 1997). This immersion experience helps students gain both theoretical and practical abilities that are useful in the job (Apostolou et al., 2017). Using both simulations and case studies helps students feel more confident when they must make financial choices, which makes them better able to cope with challenges that come up.

2.11. Blended and Technology-Enhanced Instruction

Blended learning, which combines face-to-face interactions with digital modules, allows students to work on arithmetic problems at their speed and gives them more time in class to talk about and reflect on what they have learned (Garrison & Vaughan, 2008). Meta-analyses of technology-enabled education show that when technology is used with successful teaching, it may improve accomplishment in a modest but important way (Means, Toyama, Murphy, Bakia, & Jones, 2013). Interactive spreadsheets and scenario dashboards let students swap between techniques, lives, salvage values, and activity levels to show how net income and book value change over time (Apostolou et al., 2017).

Blended learning environments are flexible and may work for many kinds of learners. They also let students interact with the material in the way that works best for them (Garrison & Vaughan, 2008). Teaching using technology may also provide students quick feedback, which helps them identify and address faults straight away. This helps you comprehend difficult accounting concepts like depreciation (Means et al., 2013).

3. Research Design and Methodology

This study used an illustrative research methodology that provided a comprehensive depiction of a phenomenon within its inherent context. Yin (2018) asserted that case studies are the most effective method for discerning the circumstances and context when such determination is challenging. The approach is qualitative, which makes it easier to obtain detailed, descriptive information by using accounting data from published accounting textbooks. This helped ensure the accuracy of information (Creswell & Poth, 2018), and the fact that the data was employed using appropriate depreciation methods for the purpose of the study.

3.1. Research Approach

This study examined how different depreciation methods are applied to a specific fixed asset using a computational approach. The study involved purchase cost of a fixed asset at $50,000, a salvage (residual) value of $5,000, and a useful life of 5 years. These criteria are necessary for the systematic usage and evaluation of depreciation algorithms. Kieso, Weygandt, and Warfield (2020) claimed that the way an asset loses value over time impacts how its cost is spread out during its useful life, which in turn affects net income and financial ratios.

The first approach is the SL method, which spreads depreciation expense evenly over the useful life of the asset. Many companies prefer to use this method because it is simple and easier to understand. The SL method allows stakeholders to know the amount of periodic depreciation expense (Needles, Powers, and Crosson, 2013). The study also employed the double-declining balance (DDB) method, which accelerates depreciation computations. This method indicates that the costs of depreciation are higher during the productive activity of the asset's first year, The DDB method works well when the depreciated asset has higher economic advantages in its initial years of usage (Heisinger & Hoyle, 2018).

The UOP techniques are also used, and this method links depreciation expenses to fixed asset utilization, which might be quantified in hours of machine operation or the number of commodities produced. This strategy works better for objects that wear down quicker during their productive use (Gibson, 2012). The study may investigate the influence of these three approaches on expenditure recognition, reported net income, and the financial reporting processes via comparative comparisons.

3.2. How to Locate Information

This study mostly utilizes documents and numerical data, such as accounting records and financial statements that delineate fixed assets. To ensure that each depreciation method is used the same way, the analysis must assess the asset's purchase price, salvage value, expected usable life, and usage rates. All these sources may assist depreciation expense computation and related charges (Kieso, Weygandt, & Warfield, 2020). In addition to the four depreciation methods of SL, DDB, UOP, and SYD, under IFRS and U.S. GAAP, IFRS recognizes component depreciation that is specifically required for engines and airframes for 8 years and 20 years, respectively (IASB, 2023; Britton et al., 2020). These secondary sources make the study more reputable by indicating that the data was acquired using a method that meets promulgated accounting principles. Glautier and Underdown (2017) indicated that depreciation is based on how useful an item is instead of how long it has been held.

3.3. Assembling Research Methodology: An Ethical Approach

When conducting educational research, it is particularly important to adhere to ethical principles. The American Educational Research Association (AERA, 2011) and the Institutional Review Board (IRB) of a university normally set rules on research human subjects. These rules safeguard the rights and privacy of survey participants and help ensure that the study is done in a responsible manner.

One of the most important ethical requirements for research in education is that prospective participants must provide informed permission. Participants will be given thorough and clear information about the study's goals, methods, potential risks, and expected benefits. They will be told again that they can quit anytime without penalty. This agreement must be signed by every participant who wishes to participate in the study (Creswell, 2014). Since this survey was illustrative research that solely computed the three depreciation methods, no survey was conducted. The purpose of the project was to improve accounting education by researching the three methods of accounting for depreciation on fixed assets.

4. Summary of Research Findings

This study used the SL, accelerated, SYD, and UOP methods for accounting of depreciation expense of a depreciable asset. The SL method of depreciation is one of the most frequent and simple techniques to use because it divided the cost of a long-term asset minus salvage value over its useful life. In Table, equipment, and historical cost of $50,000, a salvage value of $5,000, salvage value of $50,000, and useful life of 5 years were depreciated at a cost of $9000 annually under SL method. In this context, depreciation expense is debited $9,000 and accumulated depreciation is credited $9,000. The assumption under the SL method, the economic benefits of the asset will be the same over its useful life.

The SL method, financial planning on depreciation for the specific asset is easier. Spreading depreciation costs evenly provides assurance that each accounting period has the same amount of depreciation expense. The depreciation schedule under SL is depicted in Table 2.

Under SL depreciation method, journal entries to record depreciation expense from Years 1 to 5 are provided as follows:

Date	Transactions	Debit	Credit
Dec 31 Year 1	Depreciation Expense	9,000	
	Accumulated Depreciation		9,000
Dec 31 Year 2	Depreciation Expense	9,000	
	Accumulated Depreciation		9,000
Dec 31 Year 3	Depreciation Expense	9,000	
	Accumulated Depreciation		9,000
Dec 31 Year 4	Depreciation Expense	9,000	
	Accumulated Depreciation		9,000
Dec 31 Year 5	Depreciation Expense	9,000	
	Accumulated Depreciation		9,000

The DDB method, on the other hand, uses twice the SL depreciation rate on the asset's historical cost without deducting the salvage value (Kieso et al., 2022). While the historical cost of the asset is shown in Table 3, the DDB depreciation schedule is depicted in Table 4. In Table 4, the rate in using DDB method to depreciate an asset that costs $50,000 and a useful life of five years doubles the straight-line rate of 20% to 40% [(100% ÷ 5 years) (2)]. So, the first year's depreciation cost would be $20,000 (40% of $50,000), and the depreciation for the next years would be based on the asset's declining book value. The DDB method is based on the idea that the cost of an asset should match the money it makes, especially when the asset's productivity or efficiency goes down over time.

The DDB method shows the higher wear and tear or technological obsolescence of an asset during the early years of its life (Schroeder et al., 2022). Also, the DDB method can help with tax planning by having higher depreciation expenses, which reduces taxable income in the early years of the life of an asset. In using DDB, when accumulated depreciation reaches the depreciable cost, the asset is no longer subject to depreciation (Warren et al., 2023). Though the DDB method records more depreciation expense in the early years of an asset’s life, it may not work well for all types of assets. It is likely that companies will often use more of an asset in the early years because it may lose its usefulness or even be impaired. Examples of such assets include cars, computers, or manufacturing equipment. Under DDB depreciation method, journal entries to record depreciation expense from Years 1 to 5 are provided as follows:

Date	Transactions	Debit	Credit
Dec 31 Year 1	Depreciation Expense	20,000	
	Accumulated Depreciation		20,000
Dec 31 Year 2	Depreciation Expense	12,000	
	Accumulated Depreciation		12,000
Dec 31 Year 3	Depreciation Expense	7,200	
	Accumulated Depreciation		7,200
Dec 31 Year 4	Depreciation Expense	4,320	
	Accumulated Depreciation		4,320
Dec 31 Year 5	Depreciation Expense	1,480	
	Accumulated Depreciation		1,480

The UOP approach to depreciation does not assess how old an asset is; instead, it measures its utilization of activity, and the life of the asset is irrelevant. This strategy works well with assets that lose value or impair more quickly due to its activities (Kieso et al., 2022). In Table 5, the estimated output per will be: ($50,000 - $5,000) ÷ 20,000 hours. $2.24 per unit. If the equipment ran for 4,000 hours a year, the cost of depreciation would be: (4,000 hours x $2.25) $9,000. This strategy connects depreciation to how much the asset is really used, which makes it easier to analyze depreciation expense fluctuation when production varies (Schroeder et al., 2022). On the other hand, the UOP methods ensure that the cost of depreciation is closely related to the asset's economic advantages. This plan is useful for firms that have varying levels of production, like mining, manufacturing, or transportation, because it links costs to income.

The UOP method also assists with making choices and keeping costs down by showing how much of an asset's productive capability is being used. Managers can utilize this information to learn how well their firms are performing, how many new employees they need to hire, and how well they are fulfilling their production targets (Warren et al., 2023). Additionally, the UOP method is a significant method of computing depreciation expense and the assessment on how a fixed asset may lose its value due to its activity of usage. Kieso et al. (2022), affirmed that the use of UOP provides clarity on the apportionment of asset activity and its effect on revenue generation of a company. Under the UOP depreciation method, journal entries to record depreciation expense from Years 1 to 5 are provided as follows:

Date	Transactions	Debit	Credit
Dec 31 Year 1	Depreciation Expense	15,750	
	Accumulated Depreciation		15,750
Dec 31 Year 2	Depreciation Expense	13,500	
	Accumulated Depreciation		13,500
Dec 31 Year 3	Depreciation Expense	9,000	
	Accumulated Depreciation		9,000
Dec 31 Year 4	Depreciation Expense	3,375	
	Accumulated Depreciation		3,375
Dec 31 Year 5	Depreciation Expense	3,375	
	Accumulated Depreciation		3,375

The SYD method speeds up depreciation by recording more depreciation expense during the early years and less amounts in the later years of an asset's life. This plan considers assets to lose their value because of their usage over time. The SYD method does a better job of matching the cost of depreciation with the economic benefits the asset brings in its first few years, when productivity and maintenance are higher (Schroeder et al., 2022). This method considers that most assets are more useful or productive in their first few years and that maintenance costs usually go up as the assets get older. The first step in figuring out depreciation using the SYD method is to find the depreciable amount, which is the cost of the asset minus its salvage value. The depreciable cost of the computed by subtracting the historical cost minus the salvage value [$50,000 - $5,000)] = $45,000. To find the asset's 5-year life, add 1 + 2 + 3 + 4 + 5 = 15. Then, to find the depreciation fraction for each year, divide the asset's remaining life by this sum. In the first year, the fraction is 5/15, in the second year it is 4/15, and so on until the last year, when it is 1/15.

By applying these fractions to the $45,000 depreciable base, depreciation expense is computed for each year, though with different amounts. In the first year, depreciation is (5/15 × $45,000) = $15,000; in the second year, (4/15 × $45,000) = $12,000; in the third year, (3/15 × $45,000) = $9,000; in the fourth year, (2/15 × $45,000) = $6,000; and in the fifth year, (1/15 × $45,000) = $3,000. The asset's book value drops to its $5,000 salvage value after five years of depreciation, which totals $45,000. This declining pattern of depreciation matches the asset's actual use and productivity pattern with the recognition of expenses. This makes sure that more costs are matched with the higher revenues the asset helps generate early in its life. Table 8 showed the purchase price of the equipment, its salvage value, and useful life of 5 years. Finally, the depreciation schedule is depicted in Table 9.

Under SYD depreciation method, journal entries to record depreciation expense from Years 1 to 5 are provided as follows:

Date	Transactions	Debit	Credit
Dec 31 Year 1	Depreciation Expense	15,000	
	Accumulated Depreciation		15,000
Dec 31 Year 2	Depreciation Expense	12,000	
	Accumulated Depreciation		12,000
Dec 31 Year 3	Depreciation Expense	9,000	
	Accumulated Depreciation		9,000
Dec 31 Year 4	Depreciation Expense	6,000	
	Accumulated Depreciation		6,000
Dec 31 Year 5	Depreciation Expense	3,000	
	Accumulated Depreciation		3,000

5. Discussion

The comparative analysis of SL, accelerated, UOP, and SYD depreciation methods demonstrates affect financial reporting regarding taxation, net income or net loss, and managerial decision-making. The SL method ensures stability in expense recognition by allocating equal depreciation amounts across an asset's useful life (Kieso, Weygandt, & Warfield, 2020). Conversely, accelerated methods such as the double-declining balance (DDB) and SYD recognize higher depreciation charges in the early years of an asset's life by aligning them more closely with the declining productivity and economic benefits of the assets (Schroeder, Clark, & Cathey, 2022). The UOP method links depreciation directly to asset utilization by enhancing adherence to the matching principle of recording expenses in proportion to output or activity levels (Needles, Powers, & Crosson, 2020). This difference underscores the managerial trade-offs between accurate expense matching, earnings stability, and tax optimization strategies (Higgins, 2021).

The integration of interactive and active learning strategies such as simulations, case analyses, and problem-based exercises has been found to enhance students' conceptual understanding of depreciation methods. Traditional lecture-based instructions often emphasize computations rather than applications, which may restrict students' ability to interpret how depreciation affects financial statements and strategic decisions (Apostolou et al., 2017). However, when educators implement experiential learning models grounded in Kolb's (2015) experiential learning cycle and Prince's (2004) active learning framework, students engage more deeply with the conceptual and contextual dimensions of accounting. Simulation-based learning allows learners to observe how variations in depreciation methods affect financial ratios, tax liabilities, and profitability across multiple reporting periods (Ravenscroft & Buckless, 1992).

Additionally, aligning course objectives, problem-solving activities, and assessment techniques through constructive alignment (Biggs & Tang, 2011), educators can mitigate cognitive overload and promote durable knowledge transfer. These interactive engagements help students not only compute depreciation but also evaluate the broader financial and ethical implications of methodological choices.

The accounting theory of consistency, as emphasized under both U.S. GAAP (ASC 250) and IFRS (IAS 8), requires that companies apply the same depreciation method consistently across reporting periods to maintain consistency and comparability of financial statements (FASB, 2018; IASB, 2023). In educational settings, discussing the consistency principle reinforces students' understanding of how ethical and regulatory frameworks underpin accounting practice. Gaa (2021) noted that deviations from consistent application can distort earnings, impair decision-making, and reduce stakeholder confidence in financial reporting. Incorporating ethical reasoning into depreciation instructions bridges the gap between compliance and judgment, and it prepares students to uphold their views on transparency and integrity in a professional setting. As a result, the integration of ethical frameworks with technical computations fosters both conceptual depth and moral accountability for future accountants.

6. Limitations of the Study

This study provides significant information and limitations that are to be recognized. Since the study initially focused on depreciation methods and pedagogy, the use of secondary data from an accounting textbook may be inadequate. The study analyzed essential methods for evaluating asset depreciation, excluding industry-specific practices and the impact of a company's size and structure on the choice of methodology and financial reporting outcomes (Kieso, Weygandt, & Warfield, 2020). These instruments were unable to assess the efficacy of student learning or the quality of instruction (Biggs & Tang, 2011). Though this study has important insights, it has significant limitations. By relying on secondary data, the study may not reflect the use of technology that is significant to improve student learning outcomes.

Additionally, the discussion on pedagogy was constrained by concepts and practices that may not represent the actual effectiveness of classroom instructions and student learning outcomes that closely resemble real-world environments (Biggs & & Tang, 2011). Since reliance was made on the use of data from an accounting textbook, the study did not include industry-wide specific variations or analyzed the use of organizational size and the composition of these assets to provide their impact on the financial statements.

7. Conclusion

Accounting educators should integrate technology into their instructions to ensure that their students acquire the necessary knowledge and practical experience. Apostolou et al. (2017). IAS 16 and ASC 250 illustrated the importance of consistently by applying the same depreciation methods until a valuable reason is given to switch to another method. While limitations on this study depended on the use of secondary data, it established a solid foundation for future research into the pedagogical effectiveness of accounting education for issuance of bonds. The study hopes that upcoming research will deepen aspiring accountants' understanding, which may improve student learning outcomes and stronger ethical values.

The illustrative study examined depreciation methods under SL, DDB, UOP, and SYD methods under U.S. GAAP. The SL technique spreads the cost evenly across the asset's useful life, making it easier to plan and report depreciation expense periodically (Needles et al., 2013). The accelerated approach, on the other hand, records more depreciation in the first few years and less in the subsequent years. The UOP method directly connects costs to asset use or activity. This gives a more realistic picture of how costs are spread out as output levels change over time (Heisinger & Hoyle, 2018).

The SYD method considers the denominator by adding cumulative years and choosing the final year as the numerator for first-year depreciation expense. For example, for a fixed asset with a 5-year life, the denominator level is computed by adding 1 + 2 + 3 + 4 + 5 = 15. Depreciation expenses for years 1, 2, 3, 4, and 5 are (5/15 × $45,000) = $15,000; in the second year, (4/15 × $45,000) = $12,000; in the third year, (3/15 × $45,000) = $9,000; in the fourth year, (2/15 × $45,000) = $6,000; and in the fifth year, (1/15 × $45,000) = $3,000, respectively.

The decision on the choice of depreciation method to use relies on the management decision-making process. The SL strategy works well for organizations that employ assets in a reliable and predictable way (Gibson, 2012). The UOP technique may be especially useful for organizations with changing output levels, such as manufacturing facilities, since it shows how much wear and tear equipment really gets (Braun & Clarke, 2019). In general, the illustrative study showed that no depreciation technique is better than the other. It is apparent that better decision-making on a depreciation method is in conformity with U.S. GAAP, IFRS, and the strategic goals of a company (Saunders et al., Lewis, 2019; Yin, 2018).

Purchase price of equipment	$50,000
Salvage value	5,000
Useful life	5 years

Table 1. Straight-Line Method of Depreciation

Year	Depreciation Expense	Accumulated Depreciation	Book Value End of Year
1	$9,000	$9,000	$41,000
2	$9,000	$18,000	$32,000
3	$9,000	$27,000	$23,000
4	$9,000	$36,000	$14,000
5	$9,000	$45,000	$5,000 salvage value

Table 2. Straight-Line Depreciation Schedule

Purchase price of equipment	$50,000
Salvage value	5,000
Useful life	5 years

Table 3. Accelerated Method of Depreciation

Year	Beginning Book Value	Depreciation Expense (40%)	Accumulated Depreciation	Ending Book Value
1	$50,000	$20,000	$20,000	$30,000
2	$30,000	$12,000	$32,000	$18,000
3	$18,000	$7,200	$39,200	$10,800
4	$10,800	$4,320	$43,520	$6,480
5	$ 6,480	Adjusted to $1,480	$45,000	$5,000 (salvage)

Table 4. Depreciation Schedule (DDB Method)

Purchase price of equipment	$50,000
Salvage value	5,000
Estimated units of output	20,000

Table 5. Unit of Production Method

Purchase price of equipment	$50,000
Salvage value	5,000
Estimated units of output	20,000

Table 6. Units of Production Method

Year	Units Produced	Depreciation (Units x $2.25)	Accumulated Depreciation	Ending Book Value
1	7,000	$15,750.00	$15,750	$34,250.00
2	6,000	$13,500.00	$29,250.00	$20,750.00
3	4,000	$ 9,000.00	$38,250.00	$11,750.00
4	1,500	$3,375.00	$41,625.00	$8,375.00
5	1,500	$3,375.00	$45,000.00	$5,000 (salvage)

Table 7. Units of Production Depreciation Schedule

Purchase price of equipment	$50,000
Salvage value	5,000
Useful life	5 years

Table 8. Sum-of-the-Years'-Digits

Year	Remaining Life	Fraction (Remaining Life ÷ 15)	Depreciation Expense	Accumulated Depreciation	Ending Book Value
1	5	5/15	$15,000	$15,000	$35,000
2	4	4/15	$12,000	$27,000	$23,000
3	3	3/15	$9,000	$36,000	$14,000
4	2	2/15	$6,000	$42,000	$8,000
5	1	1/15	$3,000	$45,000	$5,000 (salvage)

References

AACSB International. (2020). *2020 standards for accreditation*. Association to Advance.

Collegiate Schools of Business. https://www.aacsb.edu/accreditation/standards

Agarwal, P. K. (2019). *Powerful teaching: Unleash the science of learning*. Jossey-Bass.

Alexander, D., Britton, A., & Jorissen, A. (2020). *International Financial Reporting and Analysis* (8th ed.). Cengage Learning.

American Educational Research Association. (2011). *Code of ethics*. AERA.

Apostolou, B., Dorminey, J. W., Hassell, J. M., & Rebele, J. E. (2017). Accounting education literature review (2016). *Journal of Accounting Education, 39*(1), 1–31.

Ballantine, J. A., & Larres, P. M. (2007). Cooperative learning: A pedagogy to improve students' generic skills? *Education + Training, 49*(2), 126–137.

Biggs, J., & Tang, C. (2011). *Teaching for quality learning at university* (4th ed.). McGraw-Hill Education.

Boud, D., & Feletti, G. (Eds.). (1997). *The challenge of problem-based learning* (2nd ed.). Kogan Page.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

Epstein, B. J., & Jermakowicz, E. K. (2010). *Interpretation and application of international financial reporting standards* (2nd ed.). John Wiley & Sons.

FASB. (2014). *Accounting Standards Codification (ASC) 250: Accounting changes and error corrections*. Financial Accounting Standards Board.

FASB. (2018). *Conceptual framework for financial reporting*. Financial Accounting Standards Board.

Financial Accounting Standards Board (FASB). (2014). *Accounting standards codification (ASC) Topic 250: Accounting changes and error corrections*. Norwalk, CT: FASB.

Financial Accounting Standards Board (FASB). (2018). *Statement of financial accounting concepts No. 8: Conceptual framework for financial reporting*. FASB.

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences, 111*(23), 8410–8415.

Gaa, J. C. (2021). *Corporate governance and accounting ethics*. Routledge.

Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. Jossey-Bass.

Garrison, R. H., Noreen, E. W., & Brewer, P. C. (2021). *Managerial accounting* (17th ed.). McGraw-Hill Education.

Gibson, C. H. (2012). *Financial reporting and analysis: Using financial accounting information* (13th ed.). Cengage Learning.

Glautier, M. W. E., & Underdown, B. (2017). *Accounting theory and practice* (10th ed.). Pearson Education.

Heisinger, K. E., & Hoyle, J. B. (2018). *Accounting principles: A business perspective, financial accounting*. OpenStax.

Higgins, R. C. (2021). *Analysis for financial management* (13th ed.). McGraw-Hill Education.

Horngren, C. T., Sundem, G. L., & Elliott, J. A. (2019). *Introduction to financial accounting* (12th ed.). Pearson Education.

International Accounting Standards Board (IASB). (2023). *International accounting standard (IAS) 8: Accounting policies, changes in accounting estimates and errors*. IFRS Foundation.

Johnson, D. W., & Johnson, R. T. (1994). *Learning together and alone: Cooperative, competitive, and individualistic learning* (4th ed.). Allyn and Bacon.

Kieso, D. E., Weygandt, J. J., & Warfield, T. D. (2020). *Intermediate accounting* (17th ed.). John Wiley & Sons.

Kolb, D. A. (2015). *Experiential learning: Experience as the source of learning and development* (2nd ed.). Pearson Education.

Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). *The effectiveness of online and blended learning: A meta-analysis of empirical literature*. U.S. Department of Education.

Miller, M. H., & Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *The Journal of Business, 34*(4), 411–433. https://doi.org/10.1086/294442

Needles, B. E., Powers, M., & Crosson, S. V. (2013). *Financial and managerial accounting* (9th ed.). Cengage Learning.

Needles, B. E., Powers, M., & Crosson, S. V. (2020). *Financial and managerial accounting* (12th ed.). Cengage Learning.

Paas, F., & Van Merriënboer, J. J. G. (1994). Variability of worked examples and transfer of geometrical problem-solving skills: A cognitive-load approach. *Journal of* Educational Psychdology, 86(1), 122–133.

Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education, 93*(3), 223–231.

Ravenscroft, S. P., & Buckless, F. A. (1992). The use of simulations in accounting education. *Issues in Accounting Education, 7*(2), 193–206.

Schroeder, R. G., Clark, M. W., & Cathey, J. M. (2022). *Financial accounting theory and analysis: Text and cases* (14th ed.). John Wiley & Sons.

Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science, 12*(2), 257–285.

Warren, C. S., Reeve, J. M., & Duchac, J. E. (2023). *Financial and managerial accounting* (16th ed.). Cengage Learning.

Weygandt, J. J., Kimmel, P. D., & Kieso, D. E. (2020). *Financial accounting* (10th ed.). John Wiley & Sons.

White, G. I., Sondhi, A. C., & Fried, D. (2022). *The analysis and use of financial statements* (4th ed.). Wiley.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.