
Chapter 6

The Beam Balance Technique: A New Way in Teaching and Learning Bank Reconciliation Statement

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Abstract

Beam Balance technique is an innovative visual representation in learning the bank reconciliation statement. It illustrates how the discrepancies between cash book and bank statement are reconciled by showing the effect of each discrepancy on the beam balance. With the aids of this visual representation, students can see clearly whether a transaction causes the balance in cash book to be greater or smaller than the bank statement and subsequently determine the act of reconciliation. This study contributes to the literature by adding empirical findings on the effectiveness of visualization representation on students' performance in accounting subject which is relatively scarce.

Introduction

The accounting educators today face many challenges in providing an effective learning environment to their students: the millenials whose life are occupied with visual practices and technologies. It is no longer possible to assume that the learning could be accomplished solely by linguistic resources and/or crowded slides of confusing columns and texts to the students. Hence, this study develops an innovative technique: the Beam Balance technique that illustrates how the discrepancies between cash book and bank statement are reconciled by using a beam balance.

Literature Review

The past literature had postulated that using visuals in teaching could result in a greater degree of learning as the learners seem to concentrate better and for more sustained period of time (Sims, O'Leary, Cook & Butland, 2002; Ainsworth & Loizou, 2003). Bitter & Legacy (2008) further added that students retain more information with the aid of sufficient visual content in their learning materials. In support, Smaldino, Lowther & Russell (2008) showed that without visuals in a pedagogy, the students may not learn effectively. It is also noteworthy to highlight that the use of visualization presentation does not only draw the attention but also to instil the interest of the students to learn (Barr & Parrett, 2008). This is in line with Trifonas (2008) who revealed that the incorporation of variety literacies in pedagogy would not only make education and learning more exciting but would also help capture their attention and improve their concentration. Hence, the educators should identify pedagogically which content are difficult to learn and how visual representation can overcome the cognitive barriers.

The Beam Balance Technique

The Beam Balance technique uses a beam balance to demonstrate the effect of a discrepancy on the balance in cash book and bank statement. For example, Figure 1 shows a beam balance when there is a uncredited cheque. When there is uncredited cheque, the amount had been recorded in the cash book (inflow) but there is no cash inflow in the bank statement yet. As a result, the balance in the cash book is greater than the balance in the bank statement. This is indicated by the beam balance which tilts to the left.

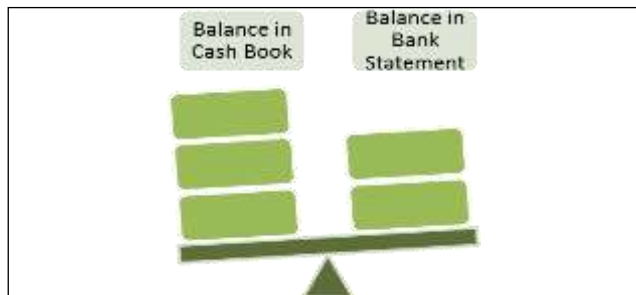


Fig. 1 The beam balance with uncredited cheque

In order to reconcile the balance in cash book with the balance in bank statement, the uncredited cheque will be deducted from the balance in cash book (the load on the left side has to be removed so that the beam balance can be balanced).

On contrary, when the balance in the cash book is less than the balance in the bank statement, for instance, the existence of a unpresented cheque that had resulted in credit entry in the cash book (outflow) but no debit entry (outflow) in the bank statement, the beam balance will tilt to the right (as in Figure 2), indicating that the balance in the cash book is less than the bank statement.

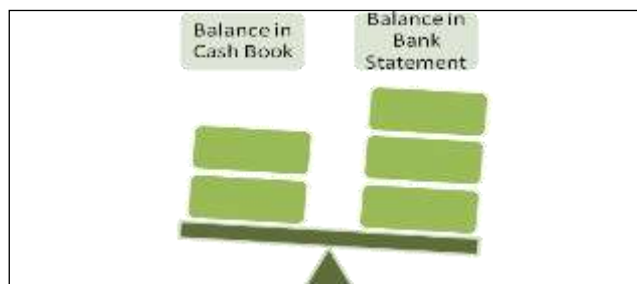


Fig. 2: The beam balance with unpresented cheque

In order to reconcile the balance in cash book with the balance in bank statement, the unpresented cheque will be added to the balance in cash book (additional weight will be loaded on the left side of the beam balance so that it can be balanced).

Similar demonstrations are shown for other discrepancies like dishonoured cheque, standing instruction, credit transfer, bank charges etc. This technique assists the students to overcome their cognitive barriers in understanding the effect of each discrepancy. By showing the beam balance, the students can easily see whether the discrepancy causes the balance in cash book to be higher or lower than the balance in bank statement. Subsequently, the students can determine the reconciliation actions: if the balance in cash book is higher, it will be deducted and vice versa, in order to be reconciled with the balance in the bank statement.

Methodology

An action research was conducted on 88 students who enrolled in Financial Accounting 1 course during session June 2016 in Politeknik Kuching Sarawak. The first class of 43 students was chosen as an experimental group while the second class of 45 students was used as a control group. The same lesson was presented to both classes but only the experimental group was exposed to the Beam Balance technique. On the other hand, in the control group, the content was communicated verbally and the same wording was used during both lessons to avoid confounding effects on the experiments. A formative test was then administered to gain the students' learning outcomes from both classes. The purpose was to identify whether the learning outcomes from the experimental group made differences as compared to the control group.

In order to derive at a more accurate and reliable decision, this study adopted multiple sources of evidence. A questionnaire was developed to investigate the participants' perceptions from experimental group towards adopting Beam Balance Technique in learning bank reconciliation statement. The questionnaire comprised of 10 questions which were rated on a five-point Likert Scale from strongly disagree to strongly agree.

The Beam Balance Technique has also been introduced to other institutions including two public universities, seven polytechnics and two secondary schools. A questionnaire comprised of 8 questions which were rated on a five-point Likert Scale from strongly disagree to strongly agree was also developed to gain the feedback from the educators pertaining to the effectiveness of the Beam Balance Technique in teaching and learning the bank reconciliation statement.

Findings

The mean scores of the quiz in bank reconciliation statement are tabulated in Table 1. The experimental group recorded remarkable higher means than the control group. This supports the hypothesis that using the Beam Balance technique enhances students performance in preparing the bank reconciliation statement.

Table 1
Mean Score of the Formative Test

| Group | Mean score | Standard Deviation |
|--------------|------------|--------------------|
| Experimental | 84.5 | 1.96 |
| Control | 54.6 | 2.84 |

Table 2
Perceptions of the Experimental Group Towards Beam Balance Technique

| | Score |
|---|-------|
| 1. Beam Balance technique helped me learn bank reconciliation statement | 4.93 |
| 2. Beam Balance technique helped me understand the interrelationships among the contents in bank reconciliation statement | 4.93 |
| 3. Beam Balance technique stimulated me to learn bank reconciliation statement independently | 4.98 |
| 4. Beam Balance technique fostered my interest in learning bank reconciliation statement | 4.98 |
| 5. Beam Balance technique can be a new teaching and learning technique | 4.93 |
| 6. I think the visualization representation can be adopted in other courses | 4.81 |
| 7. I will apply the visualization representation in other courses | 4.73 |
| 8. I am satisfied with the visualization representation in learning bank reconciliation statement | 4.93 |
| 9. I like using visualization representation in learning accounting | 4.93 |
| 10. I can adapt to visualization representation as a learning tool | 4.93 |

The results pertaining to the perceptions of the experimental group towards Beam Balance technique were encouraging (as in Table 2), indicating the usefulness of Beam Balance technique in

enhancing their learning. Almost all students were strongly agreed that the Beam Balance technique helped them to learn and understand the interrelationships of the contents in the bank reconciliation statement. Indeed, they were delighted to learn the bank reconciliation statement independently and almost all of them indicated that their interest were fostered after they were introduced to the Beam Balance technique. Almost all strongly agreed that they liked, and were satisfied with, and could adapt to the visualization representation as a learning tool in accounting.

The feedback from the educators from other institutions (as in Table 3) further support the effectiveness of the Beam Balance Technique in teaching and learning bank reconciliation statement.

Table 3
Educator's Feedback Towards Beam Balance Technique

| | | Score |
|----|--|-------|
| 1. | Improve the students' performance | 4.54 |
| 2. | Overcome the students' cognitive barriers by seeing the interrelationships | 4.54 |
| 3. | Foster the students' interest to learn independently | 4.36 |
| 4. | Help capture the students' attention | 4.54 |
| 5. | Improve the students' concentration for more sustained period of time | 4.36 |
| 6. | Inculcate the students' understanding instead of memorizing the format | 4.54 |
| 7. | Save my time as the discrepancies can be seen clearly with the demonstration of the beam balance | 4.27 |
| 8. | Save my energy as explanation is conveyed via both verbal and visual. | 4.27 |

Conclusion

To summarize, the adoption of Beam Balance technique can improve the students' performance. Students were able to overcome the barriers in understanding the concept by seeing the interrelationships among the elements in the bank reconciliation statement. It is hoped that the findings of this paper will encourage the educators to integrate the visualization representation into their pedagogy to maximise the learning experience.

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