

From Forgetting to Remembering: Repeat & Recall (R&R) Handbook as a Game-Changer in Malaysian Economy Subject

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ABSTRACT - Memory is a fundamental cognitive function that supports learning and enables individuals to perform everyday tasks. It involves encoding, storing, and retrieving information, which are essential for acquiring knowledge. In academic contexts, memory plays a critical role, especially for students studying content-intensive subjects such as the Malaysian Economy, where the ability to retain and recall information influences academic performance. To support students in improving memory, the Repeat and Recall (R&R) Memory Booster Handbook was developed. The handbook adopts a practical and student-friendly approach, using simplified explanations, visual cues, and infographics to help students retain key concepts. The main objective of this study is to examine the handbook's effect on student learning and its ease of use. A descriptive research design was employed, with data collected from 30 Malaysian Economy students through surveys and interviews. The findings show improvements in students' ability to understand and remember course material. Out of 30 participants, 28 reported that the handbook helped them grasp the content more effectively. Students also highlighted the benefits of clear language, visual presentation, and portability. Interview responses further supported these findings, with students expressing increased confidence and preparedness. Unlike traditional study guides or e-learning platforms, the handbook emphasizes hands-on use and visual-tactile learning, making it accessible for students with limited access to digital tools. The study recommends offering both printed and digital versions to increase accessibility and benefit more students.

INTRODUCTION

In today's academic environment, the ability to remember and apply knowledge is critical. Memory is no longer seen as a supplementary skill. It is now recognised as a core requirement for success, particularly in demanding fields like economics. Students are expected to master complex theories, interpret large datasets, and understand policy frameworks (Overton & Kleinschmit, 2023). This requires not only comprehension but also the ability to retain and retrieve information when needed.

To address this challenge, the “From Forgetting to Remembering: Repeat and Recall (R&R) Handbook” was developed. This handbook is a practical and accessible tool designed to support students who are learning Malaysian Economy. It introduces a structured approach to memory improvement using techniques that are supported by cognitive science. These include spaced repetition, active recall, and meaningful elaboration. Together, these methods help students remember key content such as economic terms, formulas, historical data, and analytical concepts.

The R&R Handbook was created with students in mind. It uses clear explanations, simple visuals, and step-by-step guides to help learners stay focused and confident. The handbook makes complex content easier to understand by breaking it into manageable parts. As a result, students can study more efficiently and perform better in their courses.

Memory functions through three main stages, which are encoding, storage and retrieval. Each of these stages is important for effective learning. When one stage is disrupted, the process of understanding and retaining information becomes less reliable (Savarimuthu & Ponniah, 2024). Research highlights that a well-functioning memory system is necessary for taking in new knowledge and applying it in different situations. It also shapes how individuals engage in learning and how they perform in academic settings. Mori (2015) explain that memory serves as both a cognitive tool and a reflection of personal identity.

In academic settings, students with strong memory skills are often better equipped for examinations, classroom discussions, and problem-solving tasks. On the other hand, students who struggle with memory may face difficulties in keeping up with course content and participating actively. To help overcome these challenges, the R&R Handbook offers a structured approach to improve memory. It guides students in developing effective recall strategies and consistent study habits. By supporting memory development, the handbook enhances both academic outcomes and students' confidence in learning.

THE R&R MEMORY BOOSTER HANDBOOK

People have long been interested in understanding how the mind works, especially when it comes to differences in learning and memory. Among the many factors that shape cognitive ability, memory stands out as one of the most important. It plays a central role in defining how individuals retain information and apply what they learn. As described by Mori (2015), memory involves the ability to record experiences and recall them when needed. A strong memory is closely linked to brain health and mental energy. For students, this becomes even more important because they are required to remember key information such as facts, explanations, data, numerical details and formulas.

The Repeat and Recall (R&R) Memory Booster Handbook was developed to help meet these needs. It offers simplified explanations along with visual tools, infographics and formula charts. These elements are designed to support better cognitive processing and help students retain information more effectively. The handbook is built to be portable and easy to access, making it suitable for different learning situations. Unlike digital tools that often rely on stable internet connections or access to devices, the R&R Handbook works offline. This ensures that students from diverse economic backgrounds can benefit from it equally.

There are often questions about the difference between a manual and a handbook. Manuals are usually associated with technical documents, such as those used for software or machinery. These types of materials are often referred to as user guides, help guides or reference texts. In contrast, the R&R Memory Booster functions as a handbook. It is designed to be easy to use, simple to carry and convenient to store. Students can refer to it anytime and in any location. Recent improvements have strengthened both the content and the design of the handbook, making it a more effective learning companion for students.

Preliminary findings from a pilot study involving 30 undergraduate economics students show encouraging results. The data, collected through surveys and semi-structured interviews, point to improvements in both memory performance and conceptual understanding after the students used the R&R Handbook. Many participants reported increased confidence in recalling important topics and showed greater interest and participation in the Malaysian Economy course.

It is also useful to clarify the difference in educational function between manuals and handbooks. Manuals are typically used to deliver technical or procedural instructions (Shachak et al., 2013). In contrast, handbooks such as the R&R Booster are designed to support learning in a more flexible way. They offer structured but adaptable content that can be used for both reference and review (Eduardo & Beaumont, 2018).

The design of the R&R Handbook allows it to serve as a revision guide and as a practical tool to support cognitive development. This flexibility increases its value, particularly for students who face challenges in retaining academic content. As the cognitive demands on university students continue to grow, especially in subjects that require abstract reasoning and applied knowledge, resources that enhance memory are becoming more important (Gómez-Veiga et al., 2018). This paper provides a detailed account of the creation, use and impact of the R&R Memory Booster Handbook, with a focus on how it supports student learning in Malaysian economic studies.

METHODOLOGY

Research Design

This study used a descriptive research design to examine the effectiveness of the Repeat and Recall (R&R) Memory Booster Handbook in improving memory retention and understanding among students taking the Malaysian Economy course. Descriptive research is often used to assess the current status of a phenomenon and to describe the characteristics or conditions related to a specific situation. This aligns with the view presented by Sekaran and Bougie (2010), who explain that descriptive research helps identify what exists in relation to selected variables.

In this study, the descriptive approach made it possible to collect, analyse and interpret data in a systematic manner. The researchers focused on students' cognitive experiences before and after they engaged with the R&R Handbook. The purpose of using this approach was to obtain both quantitative and qualitative insights related to student perceptions, learning challenges and memory performance. According to Sekaran and Bougie (2010), descriptive research is well suited for studies that aim to summarise and describe features within a defined group. This supports the goal of the current study, which is to evaluate how the R&R Handbook influences learning outcomes for a specific group of undergraduate economics students.

Research Method

The primary method for collecting data in this study was survey research, which was supported by semi-structured interviews. Surveys are a widely used technique in descriptive research because they make it possible to gather a large amount of data from a defined group in a short period of time. This view is supported by Sekaran and Bougie (2010), who explain that surveys are effective tools for identifying and analysing characteristics within a specific population.

In the present study, a structured questionnaire was created to assess students' understanding of economic concepts and their memory performance before and after using the R&R Memory Booster. To add depth to the findings, qualitative feedback was also obtained through semi-structured interviews with a selected group of participants. This provided a more detailed understanding of how students experienced the learning process. The use of both quantitative and qualitative methods allowed the researchers to adopt a mixed-method approach. This combination supported the triangulation of data, increased the reliability of the findings and offered a more complete picture of how the R&R Handbook influenced students' learning and memory performance.

Sampling Technique and Sample Size

This study used a non-probability purposive sampling technique to identify participants who were currently enrolled in the Malaysian Economy course at a higher education institution in Malaysia. These students were selected based on their active involvement with the subject matter and their availability to take part in the research. A total of 30 students participated in the survey, which aligns with the recommendation by Roscoe (1975) that a sample size between 30 and 500 is generally suitable for

research in the social sciences. This range allows researchers to conduct meaningful analysis while maintaining a manageable and focused sample.

From the group of 30 students, eight participants were selected for follow-up interviews. These interviews were conducted to gather qualitative insights into the usefulness and impact of the R&R Memory Booster Handbook. Cohen (1988) emphasises that selecting an appropriate sample size helps reduce the likelihood of error and improves the accuracy of research findings. Sekaran and Bougie (2010) also notes that while larger sample sizes can offer more data, they do not always lead to significantly greater precision and may introduce unnecessary complexity. Given these considerations, the sample size used in this pilot study is regarded as suitable for exploratory research. It supports both quantitative analysis and in-depth qualitative exploration, making it appropriate for evaluating the initial impact of the R&R Handbook.

Instrumentation

The main instrument used in this study was a structured questionnaire that was developed specifically for the research. It included a series of closed-ended questions measured on a 5-point Likert scale. The questionnaire was designed to assess students' understanding of economic concepts, their ease in retaining information and their overall experience using the R&R Memory Booster Handbook. To ensure reliability and clarity, the instrument was reviewed by subject matter experts and tested through a small-scale pilot run before full implementation.

In addition to the questionnaire, semi-structured interview protocols were created to capture more detailed feedback from students. These interviews explored their experiences with the handbook, including their views on the use of visual aids, the simplicity of the language and the convenience of the handbook's format. The interviews provided richer context and allowed students to share how the R&R Handbook influenced their study routines and improved their academic confidence.

Data Analysis Procedures

The quantitative data obtained from the questionnaires were analysed using descriptive statistical techniques. These included frequency counts and percentage distributions, which made it possible to identify general trends in student responses. This method allowed for a clear interpretation of students' attitudes toward the usefulness and effectiveness of the R&R Memory Booster Handbook.

In parallel, the qualitative data collected through interviews were transcribed and analysed thematically. This process involved identifying recurring themes that reflected students' perceptions. The analysis focused on areas such as ease of use, support for memory retention and the handbook's overall impact on academic performance. By combining findings from both data sources, the study applied triangulation to enhance its internal validity and reliability. This approach provided a more complete understanding of how students experienced and responded to the R&R Handbook in their learning process.

RESULTS AND DISCUSSION

Quantitative Results from Survey Data

The results from the survey involving 30 students enrolled in the Malaysian Economy course show strong positive feedback about the effectiveness of the Repeat and Recall (R&R) Memory Booster Handbook. The findings suggest that students experienced significant improvements in both understanding and retention of important economic concepts after using the handbook.

One of the most notable outcomes was that all respondents, representing 100 percent of the sample, agreed that the R&R Handbook had helped them better grasp and remember course material. This includes complex elements such as theoretical models, data interpretation, numerical information and frameworks related to economic policy. These areas are often considered challenging and require a high level of cognitive engagement. The findings are further illustrated in Figure 1, which presents the percentage of students who reported improved understanding of the Malaysian Economy subject following their use of the R&R Handbook.

Do you feel with Handbook R&R MEMORY BOOSTER can improve your understanding related to the subject?

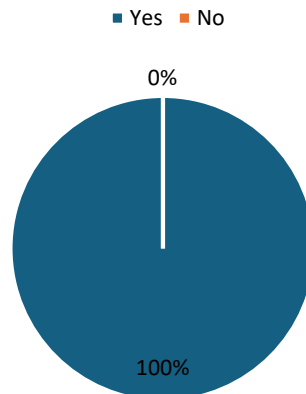


Figure 1. The Use of R&R Memory Booster Handbook Increase Students' Understanding Related to the Subject

In addition to the improvement in conceptual understanding, the study also examined the usability and accessibility of the R&R Handbook. When students were asked about the clarity of the content and the practicality of the handbook in everyday use, 93.3 percent of respondents, representing 28 out of 30 students, strongly agreed that the handbook was easy to understand. They attributed this to the use of simple language, well-designed visual infographics and clear definitions of key terms.

The same group of students also reported that the handbook was highly portable. This made it suitable for learning in different settings, especially for students who manage both academic and non-academic responsibilities. The ability to carry and use the handbook easily was viewed as a major advantage for learners with busy schedules. These findings are reflected in Figure 2, which shows the percentage of students who found the handbook easy to understand and portable. These outcomes are consistent with the principles of cognitive load theory. Sweller (2022) explains that when learning materials reduce unnecessary mental effort through simplified presentation and supportive visuals, students are more likely to understand the material and retain it over time.

Do you agree the R&R MEMORY BOOSTER handbook easy to understand and carry anywhere?

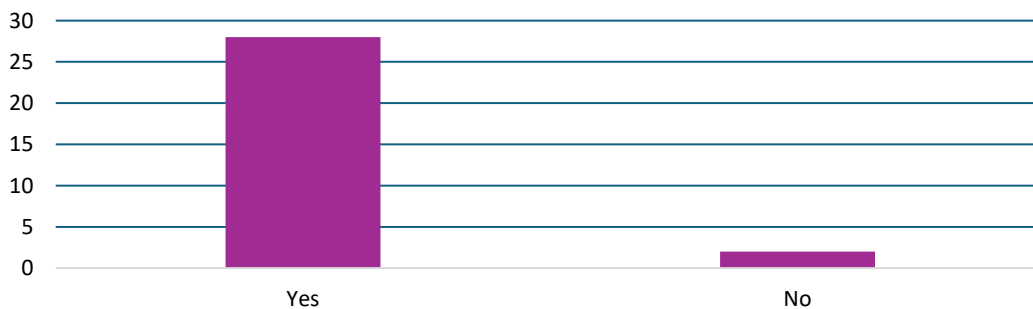


Figure 2. The R&R Memory Booster Handbook Easy to Understand and Carry Anywhere

Qualitative Insights from Student Interviews

In addition to the quantitative results, a qualitative approach was used to explore student experiences with the R&R Memory Booster Handbook in greater detail. Semi-structured interviews were conducted with eight students who had used the handbook during their Malaysian Economy coursework. The

interview data were analysed thematically, and three key themes were identified. These included improved conceptual understanding, ease of use and portability, and increased academic confidence.

Theme 1: Enhanced Conceptual Understanding Through Simplified Language and Visual Aids

The first theme relates to how the handbook helped students better understand complex economic content. All informants highlighted that the use of simplified language made it easier to grasp difficult topics. The handbook's inclusion of visual aids, such as infographics and diagrams, was also mentioned as a factor that supported both comprehension and memory. Students reported that this combination of clear explanations and visual support enabled them to retain theories, concepts and formulas more effectively over time.

"What I feel is this R&R Memory Booster handbook is very helpful to improve my understanding. This handbook is also easy to understand with the use of simple terms, infographics, and pictures that are easy to memorize." (P1)

This finding is consistent with the principles of Cognitive Load Theory, as proposed by Sweller (2022). The theory suggests that when unnecessary cognitive demands are reduced through the use of simplified learning materials, students are more likely to achieve better learning outcomes. The visual components included in the R&R Handbook appear to support this process by enhancing how information is encoded and retrieved. This effect can be explained through the concept of dual coding, introduced by Paivio (1986), which states that learning is strengthened when both verbal and visual inputs are processed together.

Theme 2: Practicality, Portability, and Accessibility

Several students described the R&R Memory Booster Handbook as convenient and flexible. They noted that its compact size and organised structure made it easy to use in various settings, allowing them to study whenever and wherever needed. This feature was especially valued by students who did not have regular access to digital devices or a stable internet connection. For these students, the physical format of the handbook provided an inclusive and reliable learning tool that supported their academic needs regardless of technological limitations.

"This handbook, which we call the R&R Memory Booster, is very interesting and full of information related to the subject. It covers the nine chapters that we studied. Ohh very helpful..." (L1)

This observation is in line with findings reported by UNESCO (2020), which emphasise the importance of providing diverse and accessible learning resources. This need has become even more critical in post-pandemic educational contexts, where unequal access to digital tools continues to impact learning opportunities and equity among students.

Theme 3: Motivation and Increased Academic Confidence

Another key theme that emerged from the interviews was the increase in motivation and self-confidence among students after using the handbook. Participants shared that they felt more prepared to handle academic assessments, including quizzes, tests and final examinations. Many expressed a greater sense of optimism about their academic performance and believed that the handbook had contributed to their improved readiness and confidence in approaching course content.

"I hope with this handbook; I will get the best results in this subject..." (P2)

This increase in motivation aligns with the theory of self-regulated learning proposed by Zimmerman (2002). The theory explains that when students have access to effective learning tools, they are better able to plan their studies, monitor their understanding and evaluate their academic progress. In this context, the R&R Handbook supported students in becoming more proactive and confident in managing their own learning processes.

DISCUSSION

The qualitative findings support the value of the R&R Memory Booster Handbook as a tool that is both cognitively supportive and pedagogically appropriate for students studying Malaysian Economy. The main themes identified in the interviews, which include improved understanding, ease of use and increased academic motivation, suggest that well-designed handbooks can help students engage with complex content more effectively. This is especially relevant for learners at the tertiary level, who often face challenges in mastering abstract and detailed subject matter.

In addition, the positive response to the printed format underscores the continued importance of physical learning materials. Despite advancements in digital education, many students still benefit from printed resources, particularly in learning environments where access to digital tools is limited. Students in this study reported better recall of key terms, formulas and statistical figures due to repeated use of the handbook and regular engagement with its content. These outcomes reflect the benefits of spaced repetition and retrieval practice (Roediger & Butler, 2011).

Based on these findings, it is recommended that similar instructional tools be developed for other academic subjects. Future versions of the R&R Handbook should also consider offering both print and digital formats to ensure greater reach and adaptability for diverse student needs.

CONCLUSION

This study examined the effectiveness of the R&R Memory Booster Handbook as a learning tool aimed at improving memory retention and academic performance among students enrolled in the Malaysian Economy course. The findings from both quantitative and qualitative data sources provide strong support for the handbook's role in enhancing students' learning outcomes. The survey results showed a clear improvement in students' understanding and recall of economic concepts, data and formulas. In parallel, insights from the interviews revealed that students appreciated the handbook's simple language, visual features and portable design. These elements were linked to increased motivation, improved comprehension and greater academic confidence.

The handbook functioned not only as a tool for memory enhancement but also as an inclusive resource for students who face digital access limitations. By offering a physical alternative to online materials, the handbook addresses current educational needs related to equity, accessibility and learner-focused support. Based on the results, the R&R Memory Booster Handbook demonstrates strong potential as a scalable and adaptable tool that can be applied in other subject areas. Its design and use of memory-based strategies make it a practical option for supporting learning in content-heavy disciplines. Future improvements may involve developing a hybrid version that integrates both physical and digital formats. This would allow the handbook to reach a wider range of learners and fit into various educational environments.

Overall, the study highlights the value of including memory-focused tools in curriculum planning. Resources like the R&R Handbook can support students in encoding, storing and retrieving key information, which are essential processes for academic success in higher education.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest

AUTHORS CONTRIBUTION

Nor Azira Ayob: Conceptualization, Methodology, Writing-Original draft preparation. **Mohd Amar Aziz:** Reviewing and Editing. **Noor Hadzlida Ayob:** Reviewing and Editing.

AVAILABILITY OF DATA AND MATERIALS

Data available on request from the authors.

DECLARATION OF GENERATIVE AI

The authors declare that no generative AI was used in the writing of the manuscript.

ETHIC STATEMENTS

Not applicable

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