Exploring factors that influence the development of reading habits among users of a mobile library in Bangladesh

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This study examines factors that are responsible for promoting and developing reading habits of the users of Bishwo Sahitto Kendra, Vrammoman Library (Mobile library) in Bangladesh. The partial least square structural equation modelling method is used to assess data from a survey of 160 mobile library users in the Bangladeshi city of Rajshahi. The R^2 value of 59.3% indicates that the proposed model effectively accounted for 59.3% of the variability in reading habits based on the independent variables included in the analysis. This suggests that the model was able to explain a significant proportion of the variance in reading habits, demonstrating its potential usefulness for predicting this behaviour. According to the findings, mobile library collections, accessibility, library location, and time of access are all factors that influence users' reading habits.

Introduction

Reading is a lifelong process which never ends[1]. Mobile, boat, and community libraries help people read more. Bangladeshi public libraries offer mobile library services through Bishwo Shahitto Kendro (BSK). It is becoming more widely acknowledged that library services, in especially those offered by public libraries, are an essential component of the socioeconomic growth of nations as well as the enhancement of the overall quality of life[2].

The library has the potential to play a significant part in the expansion of people's knowledge. The provision of library services that are well-organized and well-planned is necessary for the efficient performance of this function[3]. BSK, under the Department of Public Libraries, Ministry of Cultural Affairs of the Government of Bangladesh, distributes books to households. The mobile libraries come in seven holding sizes of 4000, 6000, 8000, 11000, and 17000 volumes. Each library visits 40 urban and rural locations each week to swap books with patrons for 30 minutes to two hours. Bus routes are set by day and location. In 1999, four of Bangladesh's largest cities- Dhaka, Chittagong, Khulna, and Rajshahi

introduced mobile libraries. Presently, 76 mobile libraries in 3200 spots are operating in 300 upazilas in 64 districts nationwide. These libraries have 3,30,000 members[4].

The lack of funds prevents the construction of libraries in all areas, but mobile libraries can help. The convenience of door-to-door services allows for more efficient use of time. Thus, all libraries encourage reading and support reading habits by providing a variety of reading environments[5]. In this study, the impact of mobile libraries in developing reading habits is investigated on the users of Rajshahi, a metropolitan city of Bangladesh.

Conceptual framework and hypothesis

The theoretical framework is the conceptual model of how one theorizes a theoretically plausible connection between many variables or essential research area variables[6,7]. Social cognitive theory served as the foundation for this investigation. Albert Bandura, a Canadian psychologist, developed the Social Cognitive Theory, which contends that motivation and learning are both primarily influenced by reciprocal determination[8]. This idea contends that a

portion of a person's knowledge can be acquired through observation of others in the context of social interaction, personal experiences, and outside media influences[9]. The theoretical framework that is provided here focuses on the major factors that are involved in the function that mobile libraries play in building reading habits in users in the Rajshahi district in Bangladesh. It places an emphasis on the significance of aspects such as a collection that has been carefully selected, the demeanour of the personnel, the efficacy of marketing, accessibility, and reading promotion activities, as well as the ultimate objective of cultivating a reading habit. Mobile libraries can plan and implement methods that maximise their influence on the development of reading habits in the population for whom they are intended by taking into consideration the elements and their interaction with one another.

Social Cognitive Theory (SCT) fits the variables in the theoretical framework well. Albert Bandura's Social Cognitive Theory emphasises how human beings, their behaviours, and their environment interact[8]. Cognitive, behavioural, and environmental aspects explain human behaviour and learning[10].

- Collection: SCT recognises environmental variables like resource availability and accessibility influence behaviour. A well-curated mobile library collection encourages cognitive and behavioural interaction with varied reading resources.

- Staff Behaviour, Cooperation, and Collaboration: The theory stresses observational learning and social interactions. Positive staff behaviour, such as helpfulness, friendliness, and involvement, models good behaviour for users and creates a positive social atmosphere in the mobile library.

- Marketing Strategy and award programme: SCT recognises environmental influences on behaviour. Marketing and prize programmes can raise awareness of the mobile library and encourage reading through social and environmental signals.

- Accessibility and services: SCT understand that contextual variables like accessibility can affect behaviour. The mobile library makes reading simpler by offering convenient locations, expanded hours, and flexible loan rules.

- Geographical location and time management: SCT recognises that environment affects behaviour. Strategically placing the mobile library in disadvantaged locations and controlling time via repeated visits boost engagement and reading habits.

SCT emphasises cognitive aspects in behaviour modification. SCT believes that people may establish and sustain reading habits by seeing and participating in reading behaviours in the mobile library's social environment. The Social Cognitive Theory best fits the theoretical framework variables because it includes cognitive, behavioural, and environmental factors that affect reading habits.

Collection

The term "Collections" refers to the assortment of books and other reading materials[11,12] that are held by the mobile library. This contains a wide variety of related items such as books, periodicals, and newspapers. It is possible to improve a user's reading experience and cultivate reading habits by providing them with a collection that has been thoughtfully curated and that considers the interests and requirements of the users. Khan and Bhatti[13] noted that collection growth is an important part of the information life cycle in libraries and information centres. In mobile libraries, a rich and relevant selection inspires and improves public reading habits. Thus, mobile library collections must be assessed based on user desire. Mobile library stock evaluation is user-centered because mobile libraries have many readers of all ages. Agee[14] described that user-centered collection evaluation techniques can assess the library's holdings' effectiveness in satisfying information seekers' demands. Librarians gain a new viewpoint on the collection by considering users' needs. Classics, foreign books, historical books, amazing fictions, and more are in mobile libraries. Thus, the researchers propose the following hypothesis:

H1: *There is a positive relationship between the collections of mobile libraries and the development of reading habit among the users.*

Staff Behaviour, Cooperation & Collaboration

The behaviour of the staff of the mobile library, including librarians and volunteers, plays an essential part in the creation of a favourable atmosphere for reading. Reading habits can be strongly influenced by staff members who are personable and friendly and who engage patrons in conversation while also aiding and recommendations. In addition, the staff, community organisations, and educational institutions may all contribute to the success of mobile library projects by working together effectively to cooperate and collaborate. Collaboration makes learning more

interesting and builds skills for ongoing learning[15]. When students and young people read, they are more likely to know basic information and be familiar with new topics or themes. This makes learning easier and more fun. Library professionals can develop reading habits among the users by their cooperation[16]. Thus, the researchers propose the following hypothesis:

H2: *There is a positive relationship among the staff behaviour, collaboration and the development of reading habit among the library users.*

Marketing strategy and award program

It is vital to have an efficient marketing plan to increase knowledge about the services offered by the mobile library and attract new users. It is possible to increase interest in the mobile library and encourage people to interact with it through promotional efforts such as social media campaigns, local community outreach, and collaborations with educational institutions such as schools and universities[17]. Individuals might be further motivated to acquire and maintain reading habits if an award programme is implemented that recognises and rewards active readers. This type of programme can be quite effective. Supplying items and services that better meet customers' needs. It emphasizes managerial marketing to achieve strategic organizational aims. Mobile libraries' creative marketing tactics are shown, along with tips for creating promotional strategies. For marketing, they hold mobile book fairs and award-winning reading contests. Based on the above, this study proposes the hypothesis as:

H3*: There is a positive relationship between marketing strategy of mobile library and the development of reading habit among the mobile library users.*

Accessibility and services

It focuses on how simple it is to utilise the mobile library as well as the variety of services that are available to patrons. Accessibility may be improved, and users can be encouraged to visit the mobile library more frequently if certain factors are in place. These factors include accessible locations, extended operation hours, and flexible lending rules. In addition, the accessibility of value-added services such as reading clubs, storytelling sessions, and digital resources can produce a more satisfying reading experience and encourage the development of

reading routines that are maintained over the long term[18]. The library's growth and services depend a lot on how satisfied the people who use it are. Feedback from possible users about the library's resources, services, and facilities should be considered to give the library the resources and comforts it needs[19]. Therefore, the hypothesis for this study as:

H4: *There is a positive relationship among the accessibility and the services of mobile library and the development of reading habit among the mobile library users.*

Geographical location and time management

When it comes to establishing the scope of their services and how successful they are, mobile libraries' locations in space and time play a significant influence. Since Drucker[20] first brought the idea of effective time management to the public's attention, the concept has gained widespread acceptance as a factor that contributes to the effectiveness of employees[21]. A greater number of people from underprivileged communities will be able to use the mobile library if it is properly positioned in regions where regular libraries are difficult to reach. In addition, effective management of time, which includes frequent visits and meticulously prepared timetables, ensures that patrons have constant opportunities to interact with the mobile library, which in turn encourages the development of reading routines.

An effective time management strategy is crucial in attracting users to the mobile library. If the mobile library cannot maintain the time the user cannot access the library easily. Mobile libraries must maintain the time properly. Library location also matters, For example pupils will not go to a library far from academic buildings. In a university, if a mobile library is stationed beside the hall, the students can get the library services easily. However, during academic hours, mobile libraries ought to be stationed near academic libraries. In this time the students can easily access the library and can get the opportunity to change the book which they have taken from the library. Thus, this research proposes the following hypothesis:

H5: *There is a positive relationship between the geographical location and time management of mobile library for the development of reading habit.*

Reading promotion activities

Reading promotion has emerged as an important area of work done in libraries[22]. Mobile libraries may organise a variety of reading promotion activities to encourage more people to read regularly. These could take the form of author appearances, book fairs, reading competitions, or other literary activities. These types of activities contribute to the development of a thriving reading culture and establish a feeling of community in relation to reading.

A positive mindset is needed to develop reading habits. Librarians are educational resources because they inform the public about their library's resources and enhance the layout to encourage browsing. Mobile libraries can promote reading with many activities such as reading camps, book chats, read-aloud to children, picture books, quizzes etc. Mobile libraries, mass-media, and social media tools can also boost reading habits. If book clubs were followed by community sharing, students discussed concepts from the various book groups and engaged in debates about the topics raised by the reading and talked about the pertinent historical information other users can show the interest of using mobile libraries[23].

Viet Nam plans to create a Lifelong Learning Society. SEAMEO CELLL and "Book Day" are among the associated efforts. Libraries, museums, cultural centres, and clubs in Vietnam will also offer lifelong learning (LLL). The Vietnamese government administers 11,900 Community Learning Centres (CLCs) and is rebuilding and developing public libraries and museums nationwide. The Viet Nam government promotes literacy and lifelong learning, but non-governmental and non-profit organisations have also started initiatives[24]. Mobile library has its readers club and also has reading story telling provision, and for this reason the user gets the attraction for using mobile library. Librarians of mobile libraries play a significant role in promoting reading habits among the users. In promoting reading habits in mobile library librarians can take various initiatives. Hence, the study proposes the following hypothesis (Fig 1):

H6: *There is a positive relationship between the reading promotion activities and the development of reading habit.*

Hypothesis and research model
Objective of the study

- To understand the role that mobile libraries, play in the development of reading habits in a Bangladeshi metropolis.

Methodology

Any study work should be done in a systematic way. Without methods, it cannot be done with any kind of study. The most important information for the study came from the following general methods. A quantitative research method was used for this study. Partial least squares structural equation modelling (PLS-SEM) is used to examine quantitative data. The method was originally implemented using a covariance-based approach (CB-SEM), but now researchers can alternatively opt for the variance-based partial least squares technique (PLS-SEM). Fornell and Bookstein[25] describe PLS, a SEM technique developed by Wold[26-28], as an iterative method that maximizes the explained variance of endogenous constructs[29]. Hair *et al*.[30] say that structural equations modelling (SEM) is a continuation of some multivariate analysis methods, especially multiple regression and factor analysis. SEM can simultaneously examine multiple dependency connections, unlike other multivariate tools. Other ways can simultaneously test and investigate a single variable connection.

Data were gathered with the help of a Google Forms survey questionnaire that was open from October 2022 to November 2022. People could choose whether to take part in the poll, and the questionnaires were given out anonymously to protect their privacy. There were two parts to the form. In part one, the work was explained in an introduction. Part two had a set of questions about the respondents' age, gender, and education level and a set of questions based on earlier studies in the context of the mobile
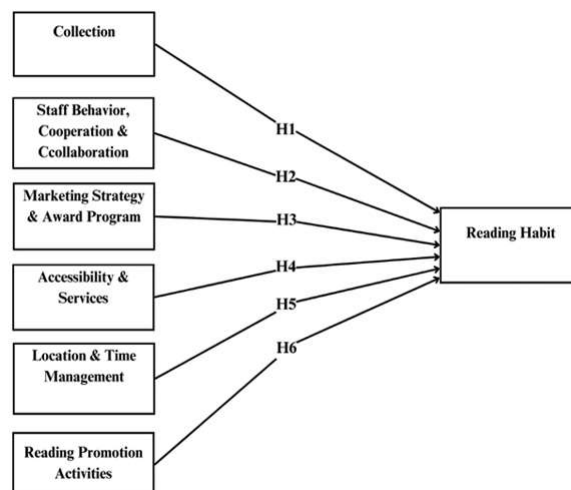

Fig. 1 — Model of research

library. The study variables were measured on a five-point Likert scale with five response categories ranging from strongly disagree to strongly agree. Appendix I shows the construct, items, and source.

First the questionnaire was sent to some of the academic researchers who conducted the pre-test on a small scale, in which they also evaluated some questionnaire issues. They did not report any significant problems that would require a major revision of the questionnaire. Their comments focused on the necessity of rewriting some questions to clarify them. Subsequently, alterations were made following their suggestions, thus, improving the questionnaire. The survey obtained 160 valid answers to the questionnaire of 53.9% (87) of females 46.01% (73) of male. The respondents were from Rajshahi region in Bangladesh. The most frequent function in the research group, amounting to 80% is that of the student, and the rest is other job holders and teachers. The experience in research activities showed that 86.87% had between 21-30 years. This study used Smart PLS 4 software[31] for model evaluation. The PLS-SEM data analysis tool efficiently controls the sample size and non-normal data in complex models[30] (Table 1).

Results and Discussion
Measurement model

The assessment of the measurement model aims to confirm the validity and reliability of the constructs and dimensions. To achieve this, two commonly used measures, Composite Reliability (CR) and Cronbach's alpha (CA), are calculated. CR is preferred in Partial Least Squares (PLS) analysis as it ranks the factors based on their reliability, whereas CA is more affected by the number of variables in each construct. The reliability of the sample and the accuracy of the

Table 1 — Demographic profile characteristics of the respondents

	Category	Frequency	%
Gender	Male	73	46.01
	Female	87	53.90
Age	10-20	9	5.4
	21-30	139	86.87
	31-40	8	4.8
	41-50	1	0.6
	50+	1	0.6
Profession	Student	128	80
	Teacher	7	4.37
	Engineer	4	2.50
	Others	21	13.12

results are evaluated using CA and CR[31]. A CA value between 0.60 and 0.70 and a CR value between 0.70 and 0.90 are considered acceptable in exploratory studies, according to Hair *et al.*[32]. Factor loadings of at least 0.60 on the indicators are considered sufficient[33]. Good convergent validity is indicated by an Average Variance Extracted (AVE) score of more than 0.5 for each category[34]. The results of the factor loadings, Composite Reliability, and Average Variance Extracted are presented in (Table 2), while the SmartPLS output of the measurement model is depicted in (Fig. 2).

To ensure the distinctiveness of the constructs, a discriminant validity assessment was conducted following the procedure outlined by Ramayah *et al.*[35]. Discriminant validity refers to the extent to which the constructs being studied can be clearly differentiated from each other. According to Fornell and Larcker[36], discriminant validity is established when the square root of a construct's Average Variance Extracted (AVE) is greater than its correlation with another construct. The results presented in Table 3 confirm the presence of discriminant validity in this study. Additionally, Table 4 displays the scores for Discriminant Validity based on the Heterotrait-Monotrait Ratio (HTMT). This study deleted two item to get better result. The code of the deleted items is MSAP3, SB5.

Structural model

The structural model is evaluated based on what Hair *et al.*[32] say should be done. The first step is to look for any possible overlap. The variance inflation factor (VIF) is a single method to measure collinearity. To measure collinearity problems, the variance inflation factor (VIF) was used. The Hypotheses testing table shows that the scores of the predictor constructs meet the VIF standards of being less than 3[32]. Secondly, the variance explained (R), which appears in the table of hypothesis testing, is used to figure out how well the structural model can predict the future. R values and path coefficients show the way the data fit the model that was thought up[33]. Thirdly, the size and importance of the path coefficients, which show the study hypotheses, are looked at. After Hair *et al.*[32], the technique of bootstrapping (Fig. 3) was used to find the significance values of the path coefficients (with 5000 bootstrap samples). So, the underlying consistency is shown. The table shows the factorial loadings, alpha coefficient, composite reliability (CR), and average

Table 2 — Factor loadings, composite reliability and average variance extracted (AVE)

Constructs	Items	Factor Loading	Cronbach's Alpha	Composite reliability (rock)	Composite reliability (rhea)	AVE
Accessibility and services	AS1	0.802				
	AS2	0.765				
	AS3	0.765				
	AS4	0.715	0.857	0.890	0.870	0.537
	AS5	0.710				
	AS6	0.624				
	AS7	0.919				
Collection	C1	0.893				
	C2	0.908				
	C3	0.904	0.941	0.955	0.942	0.809
	C4	0.873				
	C5	0.919				
Geographical location and time management	GT1	0.779				
	GT2	0.716				
	GT3	0.843				
	GT4	0.770	0.907	0.926	0.920	0.643
	GT5	0.866				
	GT6	0.787				
	GT7	0.840				
Marketing strategy and award program	MSAP1	0.654				
	MSAP2	0.789				
	MSAP4	0.718				
	MSAP5	0.818	0.862	0.897	0.876	0.593
	MSAP6	0.814				
	MSAP7	0.814				
Reading Habit	RH1	0.839				
	RH2	0.817				
	RH3	0.814	0.896	0.923	0.901	0.706
	RH4	0.871				
	RH5	0.860				
Reading promotion activities	RPA1	0.817				
	RPA1	0.868	0.782	0.873	0.785	0.697
	RPA1	0.819				
Staff behaviour, cooperation and collaboration	SB1	0.870	0.898	0.925	0.909	0.711
	SB2	0.825				
	SB3	0.909				
	SB4	0.852				
	SB6	0.753				

variation. (AVE). Average variance extracted (AVE) and composite reliability (CR) are both higher than the recommended values of 0.50 and 0.70 for all categories. So, convergence is a confirmation of truth and reliability. In the same way, the discriminant validity was found using the same criteria[34,37,36].

In PLS-SEM analysis, the criteria for evaluating the structural model include the coefficient of determination (R^2) for endogenous latent variables, the strength and significance of path coefficients, and the predictive relevance of the model[33]. R^2 values of 0.67, 0.33, and 0.19 are considered substantial, moderate, and weak, respectively in PLS path model analysis[33]. The strength and significance of the path coefficients between the exogenous and endogenous latent variables are also important. To obtain the significance of the hypothesized paths in the model, bootstrapping with 5000 sub-samples was used,
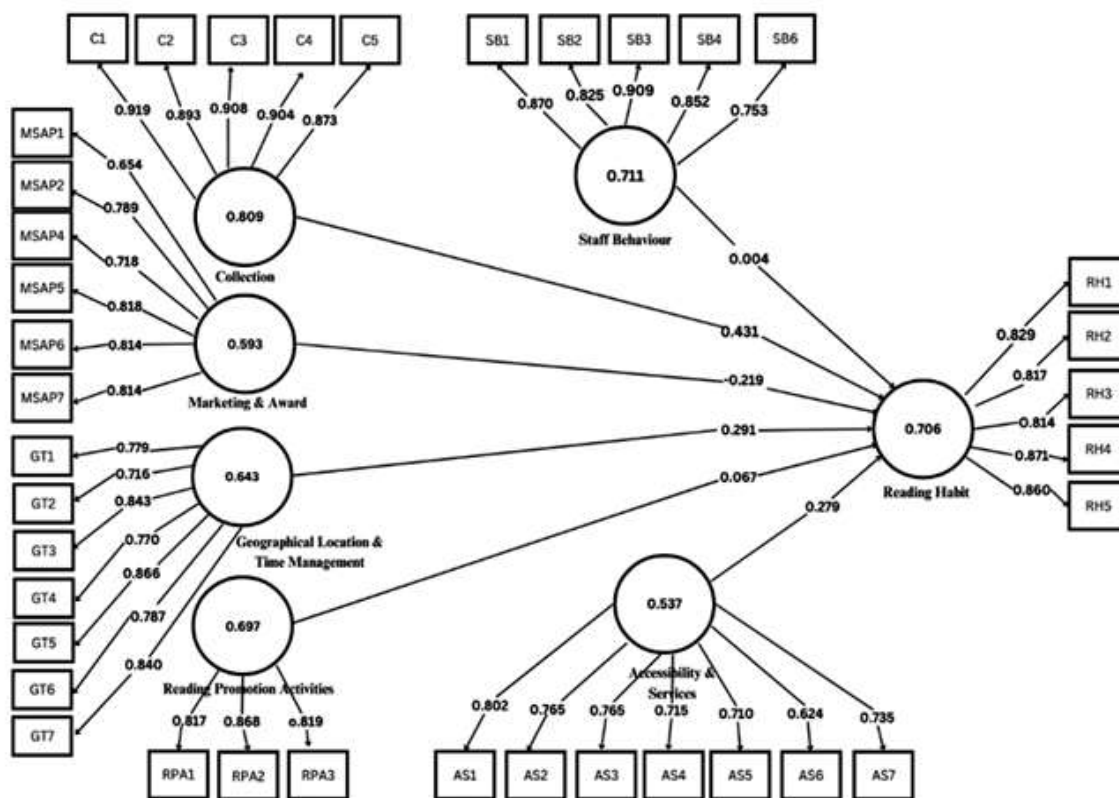
Fig. 2 — SmartPLS output of the measurement model assessment

Table 3 — Discriminant validity based on Fornell –Larcker criterion

Variables	AS	C	GT	MSAP	RH	RPA	SB
AS	0.733						
C	0.714	0.899					
GT	0.809	0.623	0.802				
MSAP	0.816	0.737	0.740	0.770			
RH	0.691	0.693	0.665	0.591	0.840		
RPA	0.669	0.599	0.576	0.687	0.531	0.835	
SB	0.722	0.692	0.729	0.783	0.581	0.559	0.843

generating p-values for each relationship between exogenous latent variables (C=Collection, SB= Staff behaviour, cooperation & collaboration, MSAP= Marketing strategy and award program, AS=Accessibility & services, GT=Geographical location and time management, RPA=Reading promotion activities,) and the endogenous latent variable (RH=Reading Habit).

Table 5 presents the R2 values, T-statistics, and p-values for all endogenous latent variables from the model analysis after running a bootstrap with 5000 subsamples. The R2 value for reading habit is 0.593, indicating that all exogenous variables explain 59.3% of the variance in reading habits of mobile library users in Bangladesh. Based on the f2, p-values, and t-values, it can be observed that the link between accessibility and services (H1) has the most significant and potent impact (t-value =4.243, p-value =0.000) on reading habit. In contrast, the results revealed that hypotheses H2 (β =0.004, p-value =0.974, p > 0.05), H3 (β =-0.219, p-value =0.128, p > 0.05), and H6 (β =0.067, p-value =0.478, p > 0.05) were rejected, while H1 (β =0.431, p-value =0.000), H4 (β =0.279, p-value =0.010), and H5 (β =0.291, p-value =0.014) (Table 5) were significant and favourably impacted reading habit. Therefore, the collections, accessibility and services, and geographical location and time management have a

Table 4 — Discriminant validity based on Heterotrait-Monotrait Ration (HTMT)

Variable	AS	C	GT	MSAP	RH	RPA	SB
AS							
C	0.782						
GT	0.899	0.662					
MSAP	0.945	0.809	0.834				
RH	0.758	0.749	0.719	0.651			
RPA	0.817	0.695	0.680	0.830	0.627		
SB	0.804	0.732	0.805	0.895	0.621	0.648	

C=Collection, SB= Staff behavior, cooperation & collaboration, MSAP= Marketing strategy and award program, AS=Accessibility & services, GT=Geographical location and time management, RPA=Reading promotion activities, RH=Reading Habit
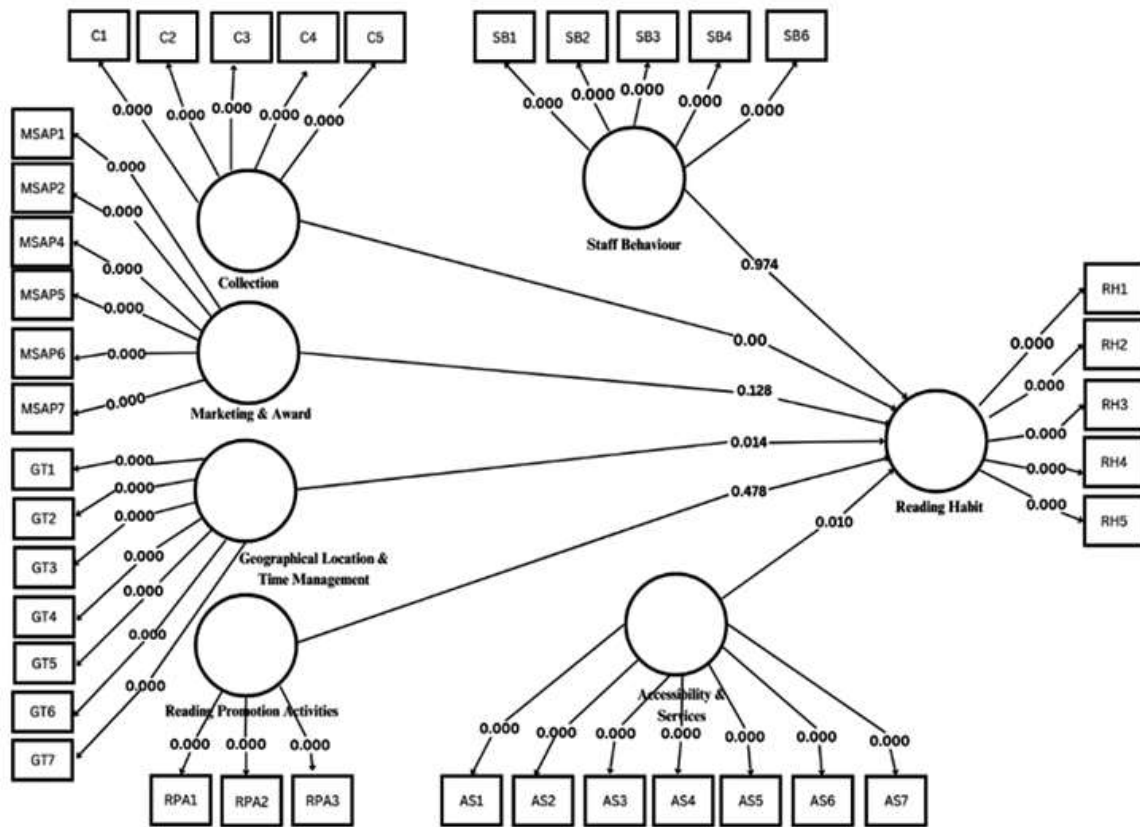

Fig. 3 — Construction of research model by bootstrapping

positive impact on developing reading habits among mobile library users. In contrast, staff behaviour, marketing strategy, and award program, and reading promotion activities did not show any relation to the development of reading habits.

Recommendations

Based on the observations from this research, we may propose a model for the smart mobile library. The Smart Mobile Library is an innovative proposal that aims to leverage technology and innovative approaches to make books and other educational resources accessible to people in remote and underserved areas of Bangladesh. This model comprises several key features that make it unique and effective. Firstly, the Smart Mobile Library van is a specially designed van equipped with solar panels, air conditioning, and shelves to store books, laptops, tablets, and other educational resources[38]. Additionally, the van has a Wi-Fi hotspot and a satellite internet connection to provide internet access to users. Secondly, the Smart Mobile Library has a

Table 5—Structural Model Analysis Results (Hypothesis Testing)

Variables	Hypothesis	β value	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	F^2	R^2	P values	Decision
AS > RH	H4	0.279	0.269	0.109	2.560	0.042	0.593	0.010	Supported
C > RH	H1	0.431	0.438	0.102	4.243	0.179		0.000	Supported
GT > RH	H5	0.291	0.293	0.118	2.462	0.063		0.014	Supported
MSAP > RH	H3	-0.219	-0.207	0.144	1.522	0.026		0.128	Rejected
RPA > RH	H6	0.067	0.071	0.095	0.709	0.005		0.478	Rejected
SB > RH	H2	0.004	0.004	0.107	0.033			0.974	Rejected

C=Collection, SB= Staff behavior, cooperation & collaboration, MSAP= Marketing strategy and award program, AS=Accessibility & services, GT=Geographical location and time management, RPA=Reading promotion activities, RH=Reading Habit

digital library that users can access using laptops, tablets, or smartphones. This digital library has a vast collection of e-books, audiobooks, videos, and other educational resources in both Bangla and English languages. Thirdly, the Smart Mobile Library has an online learning management system (LMS) that users can access from their devices[39]. The LMS has interactive courses, quizzes, and assessments to help users improve their knowledge and skills. Fourthly, the Smart Mobile Library has a user tracking and feedback system that enables the library staff to monitor the usage of the library and collect feedback from users[40]. This system also helps the library staff to customize the library's services according to the users' needs. Fifthly, the Smart Mobile Library conducts regular outreach and engagement activities to encourage community participation and promote the importance of reading and education. These activities include book clubs, storytelling sessions, workshops, and cultural events, among others[41]. Sixthly, the Smart Mobile Library partners with local organizations, schools, and community groups to expand its reach and impact[42]. These partnerships help the library identify each community's specific needs and tailor its services accordingly. Finally, the Smart Mobile Library has a sustainable business model that enables it to operate efficiently and generate revenue. The library may charge a nominal fee for its services or partner with local businesses to sponsor its activities[43]. Overall, the Smart Mobile Library model leverages technology, innovation, and community engagement to make books and educational resources accessible to people in remote and underserved areas of Bangladesh. By providing a range of services and resources, the library empowers individuals and communities to improve their knowledge, skills, and opportunities for a better future (Fig. 4).
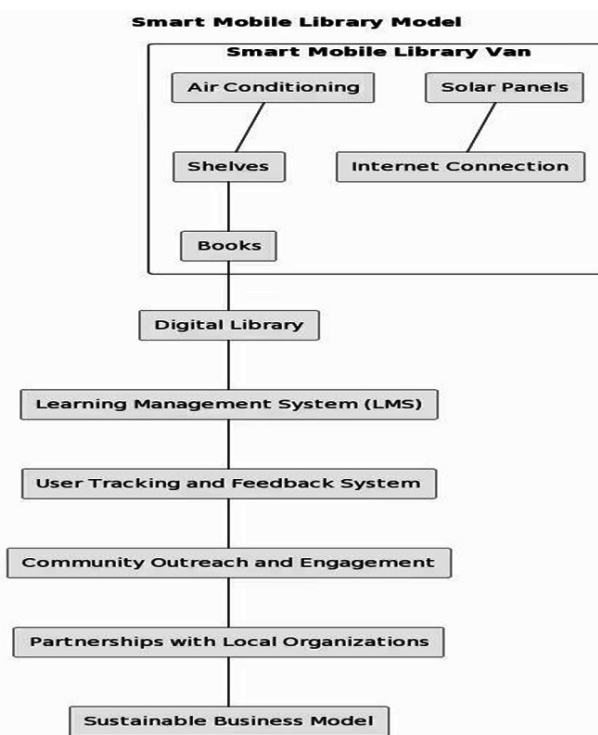

Fig. 4 — Proposed Smart Mobile Library Model for Bangladesh

This research has several drawbacks. The study's environment may prevent generalisation. Bangladesh's mobile library system may differ from others, affecting reading patterns. Therefore, apply these findings with care. The study has little data. In addition, the study did not examine how socioeconomic position, educational level, or age affect reading habits. These factors may shape reading habits and help explain how mobile library users in Bangladesh read. Finally, the study only analysed a few reading habits-related aspects. Future study should address these elements, which may influence reading habits. In conclusion, the study sheds light on Bangladeshi mobile library users' reading habits,

however it has limits. Future research should overcome these constraints and better understand mobile library customers' reading patterns.

Conclusion

The analysis shows that collections, accessibility, and services, as well as location and time management, are crucial elements that favourably affect the formation of reading habits among Bangladesh's mobile library users. Tthe availability of a wide variety of books, simple access to the library's services and resources, and the place and time of the users' trips to the mobile library can all have a big influence on their reading habits. The analysis also indicates that staff behaviour, marketing tactics, an awards programme, and initiatives to promote reading did not significantly affect Bangladeshi mobile library users' adoption of reading habits. Although these elements could contribute to the promotion of reading habits in other settings, it seems that they have little bearing on the establishment of reading habits in Bangladesh's particular environment of mobile libraries.

Policymakers and industry professionals working in the mobile library sector should take these findings into consideration. To promote and foster the development of reading habits among users, they advise concentrating efforts on enhancing the collections, accessibility, and services, as well as the geographic location and time management of mobile libraries. The findings also imply that spending money on staff behaviour, marketing tactics and incentive schemes, and reading promotion initiatives may be better directed towards other areas that have a greater influence on the development of reading habits in the setting of mobile libraries in Bangladesh.

Conflict of interest statement

All authors declare no conflict of interest.

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Appendix I

Variables and items of the study

Variables	Code	References
Collection 1. The mobile library has variety of collection. 2. Recognized foreign books are available here. 3. Historical books can be found. 4. Remarkable fiction are available. 5. Based on collection it is possible to attract the readers.	C1, C2, C3, C4, C5	Lee[11], Levine-Clark[12], Morris & Presell[44], Khan & Bhatti[13], Agee[14], Glasgow[45]
Staff behaviour, cooperation & collaboration 1. Library staffs are cooperative. 2. They help to find the required book. 3. They help for being a library member. 4. To be a library member of this library is easy and simple. 5. Mobile library services can promote the cultural and social life.	SB1, SB2, SB3, SB4, SB5	Mannan & Bose[46], Lee[47], Moreland *et al.*[48], Mauro[49], Zelcer *et al.*[50], Islam[51] Turner[52], Atkinson[53], Obenauf[54]
Marketing strategy & award program 1. The membership fee is reasonable. 2. It makes effective campaign for its publicity like book fair. 3. New books are displayed by poster. 4. It has display and exhibition corner. 5. Different programs are taken for the attraction of the readers. 6. Reading based award programs helps me to encourage reading books. 7. Virtual author visits can generate a lot of interest in books and reading.	MSAP1, MSAP2, MSAP3, MSAP4, MSAP5, MSAP6, MSAP7	Madhusudan[55], Patil & Pradhan[56], Narayana[57], Vishwa Mohan *et al.*[58], Roberts[59], Kassel[60], Spalding & Wang[17]

(Contd.)

Appendix I
Variables and items of the study (*Contd.*)

Variables	Code	References
Accessibility & services 1. Choosing process of reading materials is convenient. 2. The number of vehicles for services are sufficient. 3. The spot of this vehicle is sufficient. 4. It provides educational services for all ages. 5. Mobile library services ensure permanent literacy among general people. 6. It provides current awareness services. 7. It has lending services.	AS1, AS2, AS3, AS4, AS5, AS6, AS7	Millson-Martula & Menon[61], Copeland[62], Mahindra & Kumar[63]
Geographical location and time management 1. The library service place is suitable. 2. The library service spot is available. 3. Mobile library stops in the selected area. 4. The opening hour of mobile library is convenient. 5. For each stoppage the time is fixed. 6. Mobile library comes your stoppage regularly on time. 7. Mobile library encourages to use free time properly.	GT1, GT2, GT3, GT4, GT5, GT6, GT7	Chase *et al.*[64], MacCann *et al.*[65],
Reading promotion activities 1.It has readers club. 2.Mobile library arranges Different cultural program like reading competition, book review, essay writing. 3.It has story telling provision.	RPA1, RPA2, RPA3	Sangkaeo[66], Raphael & McMahon[23], Fish[67], Chance & Lesesne[68]
Reading Habit 1. I use mobile library regularly. 2. I enjoy reading at home and school. 3. Now I use less mobile/social media. 4. Now I am very willing to read Fiction/nonfiction/newspaper. 5. I feel that the existence Material of mobile library is accurate. 6. I really think that the mobile library has promoted my reading habit of the user.	RH1, RH2, RH3, RH4, RH5, RH6	Alexander & Fox[69], Oji & Habibu[70]

Variable's definition

Name of variables	Variable definition	Indicator
C	The action or process of collecting someone or something.	C1-Variety of collection C2-Foreign books C3-Historical books C4-Remarkable fiction C5-Attraction
SB	Staff behaviour is defined as an employee reaction to a particular situation at workplace.	SB1-Cooperative SB2-Helpful SB3-Help for being a library member SB4-Easy & simple process is following for being a member SB5-Promote the cultural and social life
MSAP	Marketing refers to activities a company undertakes to promote their publicity.	MSAP1- Membership fee MSAP2-Campaign MSAP3-Display book MSAP4-Exhibition corner MSAP5-Programs are taken for attraction MSAP6-Reading based award program

(*Contd.*)

Variable's definition (*Contd.*)

Name of variables	Variable definition	Indicator
AS	Accessibility is the practices of making information, activities and meaningful for as many people as possible.	AS1-Choosing process AS2-Number of vehicles AS3-Spot of vehicles AS4-Educational services AS5-Literacy AS6-Lending services
GT	Time management is a method of making plans for the way to spend your time on various tasks.	GT1-Suitable spot GT2-Available place GT3-Stops in the selected area. GT4-Opening hour GT5-Fixed time GT6-Using free time
RPA	Reading promotion activities includes measures that aim at developing a positive approach to reading.	RPA1-Readers club RPA2-Story telling provision RPA3-Arranges cultural program.

C= Collection, SB= Staff behaviour, cooperation & collaboration, MSAP= Marketing strategy and award program, AS=Accessibility & services, GT=Geographical location and time management, RPA=Reading promotion activities