Development Of Digital Learning Platform to Boost Chinese Children's Mental Health Awareness: Experts' Evaluation

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Abstract

The increasing prevalence of mental health disorders among children, exacerbated by the COVID-19 pandemic, calls for innovative educational approaches and tools. Traditional mental health curriculum in Chinese elementary schools often rely on didactic methods that fail to engage students effectively. The "Mind Explorers" digital learning platform addresses this issue by enhancing mental health awareness among grade-2 students. Based on the ADDIE instructional design model and Biggs' Constructive Alignment model, the platform integrates learning outcomes, content, activities, and assessments via Google Site. The sample unit "Know About Yourself" focuses on self-awareness and emotional regulation through storytelling, reflective activities, and interactive quizzes. Expert evaluations indicate positive reception of the platform's content, usability, and educational alignment, with suggestions for enhancing design aesthetics and accessibility. Through a mixed-methods research design, this study underscores the potential of digital tool to transform mental health education, promoting engaging and effective learning experiences for young learners.

Keywords: *Digital Learning, Mental Health, Elementary Education, Self-Awareness, Emotional Regulation*

INTRODUCTION

The prevalence of mental health disorders among children and adolescents is a growing concern globally. According to the World Health Organization (WHO), 970 million people worldwide had a mental disorder, and approximately 10-20% of them were children and adolescents (WHO, 2019). By 2019, approximately 58 million children and adolescents were living with anxiety disorders, and around 23 million were affected by depression (WHO, 2019). The situation has worsened due to COVID-19 pandemics, leading to a massive 25% increase of global prevalence of anxiety and depression and young people suffering the worst hit (WHO, 2022). The magnitude of the problem is also reflected in individual countries' statistics. For instance, in England, about 4 million people aged 7 to 24 have a probable mental health illness (Young Minds, 2023). In the United States, the national prevalence of children with at least one mental health disorder was reported to reach around 16.5% (7.7 million) in 2019 (Whitney & Peterson, 2019).

Research indicates that teaching mental health knowledge and regulation skills can profoundly influence a child's overall well-being and future success, such as their adult family life, social interactions, happiness index, and work achievements (Gueldner et al., 2020; Murray et al., 2021). Integrating digital tools into the mental health curriculum can enhance learning experiences by providing diverse multimedia resources, interactive activities, and immediate feedback (Wang, 2023). This can be particularly beneficial to the effectiveness of instruction, where traditional methods may fail to engage students or address their individual needs.

Problem Statement

The *Report on National Mental Health Development in China* (2019-2020) revealed that 24.6% of children and adolescents from 7 to 18 years old, reported feeling mild or severe depression (Fu et al., 2021). Of the total population, the detection rate of depression at the elementary school level is about 10%. The detection rate of major depression in elementary school is about 1.9% to 3.3% (Fu et al., 2021). This shows the serious mental health issues that elementary pupils are facing and the Ministry of Education (MOE) of the People's Republic of China (2023) calls for a more effective mental health curriculum in schools.

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However, in the current China's elementary school setting, major of mental health teachers tend to insist the traditional styles, favoring the systematic teaching of psychological concepts, characteristics, theories, etc., in a monotonous and boring way, while students take notes, memorize, and, what's worse, arrange for examinations on mental health education (Qiao, 2023). Such a kind of curriculum that does not follow constructivism and student-centeredness cannot stimulate students' genuine interest in mental health learning, and even increases their learning and mental burden.

Given the increasing prevalence of mental health issues among children and the shortcomings of traditional mental health education methods, there is a pressing need for innovative and engaging approaches to mental health education. Implementing a comprehensive online learning platform with Google Site to boost mental health awareness will enable Chinese children to develop the necessary knowledge and skills to thrive academically and socially.

"Mind Explorers" Digital Teaching Tool

"Mind Explorers" is a digital learning platform based on the Google Site system and designed to enhance the mental health awareness of grade-2 students in China. The name "Mind Explorers" was chosen to evoke a sense of adventure and curiosity among young learners, aligning with the storytelling approach central to the platform. This platform follows Biggs' (2014) Constructive Alignment model, ensuring a cohesive integration of learning outcomes, contents, activities, and assessments. The main content is based on the textbook *Pupil Mental Health (2nd Grade)* published by Beijing Normal University Press, written in both English and Mandarin Chinese on the platform. This study presents one unit, "*Know About Yourself*," as a sample for experts to evaluate the quality of this innovative tool. The unit aims to help students develop self-awareness and understanding of their emotions. The unit content begins with a story about animals in a school setting, which serves as an analogy for recognizing personal strengths and weaknesses. Activities involve students reflecting on their own characteristics, expressing their thoughts and feelings, and discussing how they can manage their emotions. The unit encourages students to create a self-confidence card, share personal experiences, and engage in interactive discussions with teachers and peers. The structure of this teaching tool is as follows (Figure. 1):
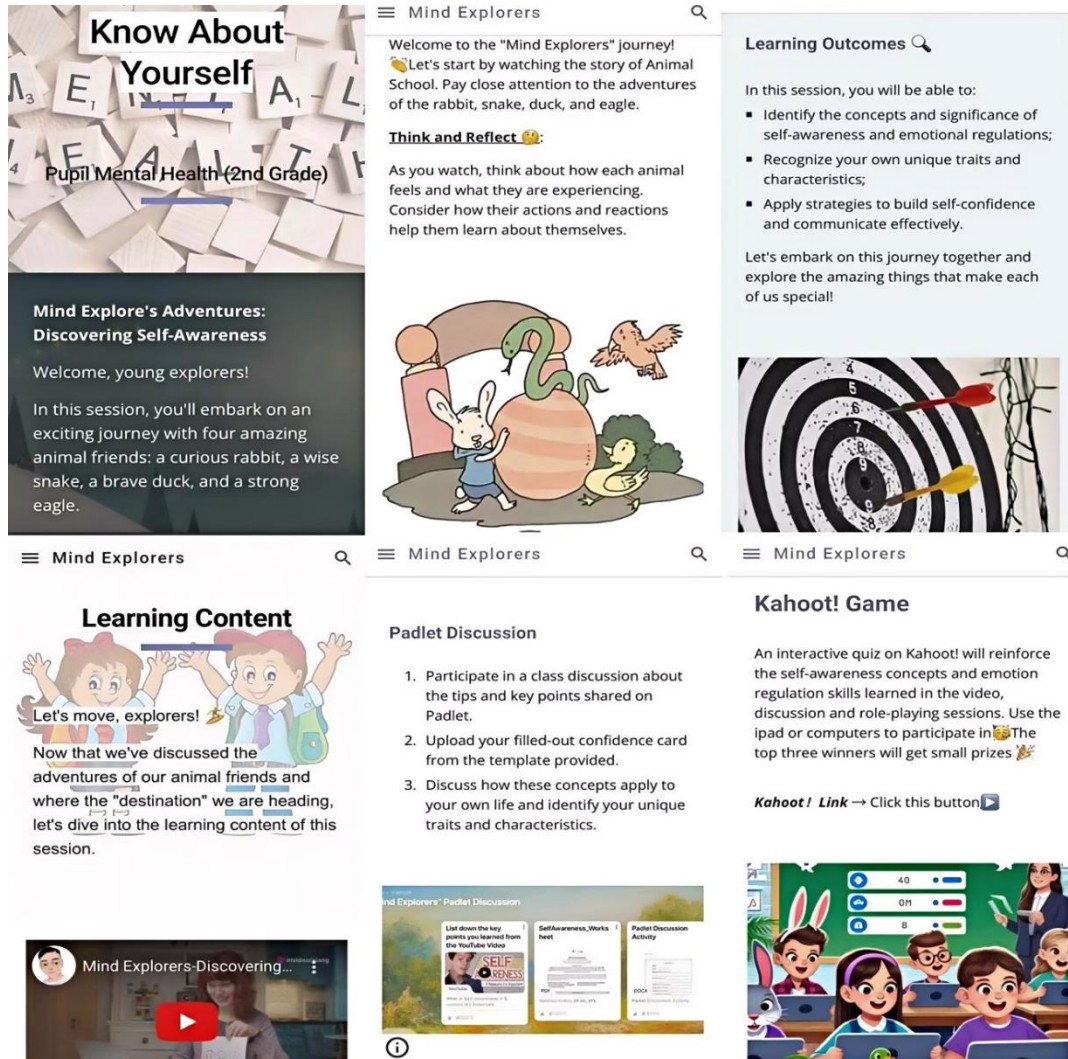
Figure 1. Interfaces of "Mental Explorer" learning platform

Learning Outcomes

Students will be able to: 1). identify the concepts and significance of self-awareness and emotion regulations; 2). recognize their own unique traits and characteristics; 3). express their emotions and understand the feelings of others; 4). apply strategies to communicate effectively and resolve misunderstandings.

Learning Content

The main learning content in this unit involves: 1). storytelling: the teacher will narrate a story about animals in a school setting, emphasizing the importance of self-awareness and emotional expression. 2). self-awareness and emotional recognition: the teacher will introduce the concepts of self-awareness and emotional recognition; demonstrate how to identify and label emotions; prompt students to think about and discuss their feelings and traits; encourage students to listen to their peers' experiences and perspectives. 3). personal reflection: the teacher will facilitate activities that encourage students to reflect on their own characteristics and experiences, fostering a deeper understanding of themselves. This includes guided journaling and discussion prompts to help students articulate their thoughts and feelings.

Learning Activities

Students can do the following learning activities on this platform: 1). watching a YouTube video to learn self-awareness concepts. 2). sharing thoughts and experiences via a class Padlet. 3). role-playing to practice expressing emotions and understanding perspectives based on the given scenarios. 4). joining in an interactive quizzes via Kahoot! to reinforce the lesson content.

Learning Assessment

The learning assessment is based on immediate feedback, online quizzes and activities during class. At the post-learning stage, students are required to write a reflective essay as the summative assessment to wrap up the learning, reflect the feelings and experiences, and promote deeper self-awareness.

Research Objective

The objective of this study is to evaluate the instructional design of the "Mind Explorers" in enhancing mental health awareness among grade-2 students. This evaluation was conducted by gathering scores and feedback from experts on the information design, interaction design, and presentation design of the platform. Specifically, the study aims to answer the two research questions: 1). What is the assessment score of "Mind Explorers" designing from experts' evaluation? 2). How do experts view the innovative nature and instructional effectiveness of the "Mind Explorers" digital tool?

LITERATURE REVIEW

Current Mental Health Curriculum in China

With mental health issues among Chinese children and adolescents escalating at an alarming rate these years, there's widespread public concern arousing on the mental health curriculum for elementary and secondary school settings (Chen, 2022). In the *Special Action Plan for Comprehensively Strengthening and Improving Student Mental Health in the New Era (2023-2025)*, the MOE (2023) clearly emphasized that the construction of mental health curriculum should be strengthened, and the role of classroom instruction should be played as the main channel for students' mental health development.

Nevertheless, in the actual curriculum implementation process, there is still much resistance to this curriculum reform. For example, a lot of teachers in classrooms believe in the traditional didactic teaching method, focus on unilaterally instilling psychological knowledge into students (Qiao, 2023), and lack attention to students' activity, experiential and generative concerns (Li & Yang, 2022). Such a mental health education is difficult to realize the objectives of the curriculum, and lacks practical help for students' mind growth.

Principles and Strategies of Instructional Design

The design of the "Mind Explorers" teaching tool is rooted in the principles of instructional design as outlined by Gagné et al.(2005), aligning with Biggs' (2014) Constructive Alignment model. According to Gagné et al.(2005), the process of instructional design emphasizes the importance of performance objectives, instructional strategies, use of media, material selecting and evaluation setting. These principles are all reflected in the Constructive Alignment model (Biggs, 2014), which provides a foundational framework in the design of the "Mind Explorers". By applying these principles and framework, the teaching tool ensures that all components of the educational process work together seamlessly to achieve the desired learning outcomes.

The learning activities, such as watching instructional videos and participating in role-playing scenarios, are directly aligned with the objectives of developing self-awareness and emotional regulations. This alignment helps create a more coherent and effective learning experience for students.

About the use of media and materials selecting, the platform employs vibrant and interactive multimedia content, such as videos and engaging illustrations, to capture students' attention and make learning more enjoyable. The website design incorporates interactive elements like animations, quizzes, and games, which help maintain students' interest and encourage active participation.

Interactive visuals can significantly improve learning outcomes by making abstract concepts more concrete. Clear visual cues guide students through the learning activities, reducing cognitive load and allowing them to focus on the content. Being hosted on Google Sites, the platform is easily accessible from any device with internet access. This ensures that students can engage with the content both in the classroom and at home, providing flexibility in learning. The platform integrates tools like Kahoot! for quizzes and Padlet for collaborative activities, offering immediate feedback to students. This feature is crucial for formative assessment, allowing students to understand their progress and areas for improvement in real-time.

By leveraging these visual and technical advantages, the "Mind Explorers" platform offers a comprehensive and engaging learning experience that supports the development of self-awareness and emotional regulation skills among grade-2 students.

Gamification in Digital Learning Tool

Gamification, the process of incorporating game design elements into non-game contexts, has emerged as a significant trend in educational technology (Snelson et al., 2024). This approach leverages the motivational aspects of games to enhance student engagement and learning outcomes. In digital learning tools, gamification often includes elements such as points, badges, and interactive challenges (Christopoulos & Mystakidis, 2023). The underlying principle is that these elements can increase student motivation, promote active learning, and improve knowledge retention (Bai et al., 2020).

The "Mind Explorers" platform incorporates gamification through activities like Kahoot! quizzes, where students compete to answer questions about self-awareness and emotional regulation. Winners are awarded small prizes and virtual badges, which further motivates participation and reinforces learning. This method transforms traditional learning activities into interactive and competitive experiences, making education more appealing and effective for young students. By integrating these game elements, "Mind Explorers" not only enhances the learning experience but also promotes a fun and engaging classroom environment.

METHODOLOGY

Digital Teaching Tool Design Process: ADDIE Instructional Model

The ADDIE instructional model (Rossett, 1987), which stands for Analysis, Design, Development, Implementation, and Evaluation, has been used to guide the development of the "Mind Explorers" platform. This model provides a systematic approach to instructional design, ensuring that all aspects of the learning process are carefully planned and executed (Molenda, 2003). In the context of this project, the Analysis, Design, and Development phases have been completed, focusing on identifying the needs of the students, designing the learning activities, and developing the digital platform. The current study focuses on the Evaluation phase, which involves gathering expert feedback to assess the effectiveness of the platform (Figure. 2). This phase is crucial for refining and improving the platform based on expert insights and ensuring that it meets the educational goals and needs of the students.
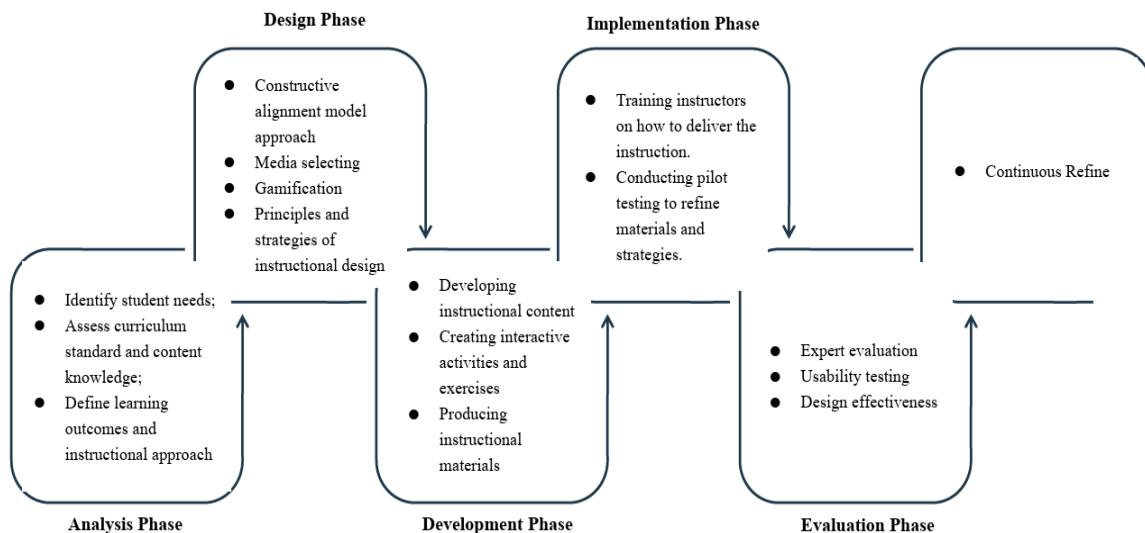
Figure. 2 "Mind Explores" Design Process based on ADDIE Model

Mixed-Methods Design

An explanatory sequential mixed-methods design was adopted, as outlined by Creswell and Creswell (2017). This approach begins with the collection and analysis of quantitative data, which is then followed by the collection and analysis of qualitative data. The purpose of this design is to use qualitative data to help explain or build upon the initial quantitative results.

The research process was structured in two distinct phases. In the first phase, quantitative data was collected using a structured questionnaire adapted from Danakorn (2011). This instrument was designed to evaluate the information design, interaction design, and presentation design of the "Mind Explorers" platform. Participants rated various aspects of the platform on a four-point Likert scale, providing a comprehensive assessment of its effectiveness.

Following the quantitative phase, the second phase involved qualitative data collection through semi-structured interviews with experts. These interviews were conducted to gain deeper insights into the quantitative findings, allowing for a richer understanding of the platform's strengths and areas for improvement. The qualitative data helped to contextualize the quantitative results, providing detailed feedback on the instructional design, content quality, and engagement effectiveness of the platform.

The explanatory sequential design ensures that the quantitative results guide the qualitative inquiry, enhancing the overall validity and reliability of the research. This method allows for a comprehensive evaluation of the "Mind Explorers" platform by integrating numerical data with detailed, narrative feedback from experts.

This methodological approach ensures that the research is both robust and comprehensive, leveraging the strengths of both quantitative and qualitative methods to provide a nuanced evaluation of the "Mind Explorers" platform.

Participants

To ensure that the study benefits from a wide range of professional perspectives, purposive sampling (Rapley, 2014) was used to select experts in relevant fields. By applying a series of criteria for selecting experts, the final participants included: 1). 2 instructors who have more than 10-year experience in mental health teaching in an elementary school in Suzhou, Jiangsu, China; 2). 2 specialists who have been working in the mental health curriculum planning department for 5 years in Suzhou, Jiangsu, China; 3). 1 expert who has 5-year professional experience in instructional technology and innovation in Suzhou, Jiangsu, China. These 5 experts provided valuable feedback on the "Mind Explorers" platform, contributing to its refinement and improvement.

Instrumentation

Evaluation Rubric. The evaluation rubric for the "Mind Explorers" platform was adapted from Danakorn (2011) and is composed of three sections, totaling 36 items evaluated on a four-point Likert scale. This rubric assesses the platform across three key domains: information design, interaction design, and presentation design. Each item is scored from 1 to 4, where *1* represents *low quality*, *2* indicates *average*, *3* denotes *good*, and *4* signifies *excellent* quality. The rubric has demonstrated high reliability, with an alpha coefficient of .87.

Interview Protocol. The qualitative component of the evaluation involved semi-structured expert interviews. These interviews were designed to gather detailed insights into the experts' scoring and to further explain their quantitative evaluations. The interview protocol was meticulously prepared to ensure a thorough exploration of the key areas of the platform's design and effectiveness. The key areas of inquiry in the interview protocol included: 1). The Appropriateness and Engagement Effectiveness of the Content; 2). The Alignment of Learning Activities with Educational Goals; 3). The Usability and Accessibility of the Platform; 4).Suggestions for Improvement. These interviews were conducted one-on-one and lasted between 15 to 20 minutes each. They were audio-recorded, transcribed, and analyzed thematically (Braun & Clarke, 2012) to extract valuable insights that could further refine and improve the "Mind Explorers" platform. The combination of quantitative and qualitative data provided a comprehensive evaluation, ensuring that the platform is not only effective but also engaging and accessible for all users.

Data Collection

The data collection process for evaluating the effectiveness of the "Mind Explorers" digital learning platform involved several carefully planned steps to ensure comprehensive and unbiased feedback from the experts.

Online Meeting Presentation. An online meeting was conducted via Zoom, where the "Mind Explorers" learning tool was showcased to five experts (Figure. 3). During this session, the rationale and design ideas behind the platform were thoroughly presented to the experts. This initial presentation aimed to familiarize the experts with the platform and its objectives, ensuring they had a clear understanding of its purpose and functionalities.

Figure. 3 Online Presentation and Evaluation on "Mind Explores" Design

Quantitative Data Collection. Following the presentation, experts were asked to provide their ratings on the platform using a predetermined evaluation rubric. This rubric, adapted from Danakorn (2011), included 36 four-point Likert scale items across three sections: information design, interaction design, and presentation design. To ensure immediate and impartial feedback, experts completed the ratings synchronously without discussion. Their responses were gathered via a Google Form, which facilitated efficient data collection.

Qualitative Data Collection. After the quantitative data collection, individual semi-structured interviews were scheduled with each expert. These interviews were conducted one-on-one at predetermined times, allowing for a deeper exploration of the experts' views. The interviews lasted between 15 to 20 minutes each and were guided by a pre-designed interview protocol. The key areas of inquiry included the appropriateness and engagement effectiveness of the content, the alignment of learning activities with educational goals, the usability and accessibility of the platform, and suggestions for improvement. The interviews were audio-recorded to ensure accuracy and were subsequently translated and transcribed for analysis.

Data Analysis

The data analysis process involved both quantitative and qualitative methods to provide a comprehensive evaluation of the "Mind Explorers" platform.

Quantitative Data Analysis. The quantitative data collected through the evaluation rubric were analyzed using the IBM Statistical Package for Social Sciences (SPSS) Statistics 29. The mean and standard deviation (SD) ratings for each item were calculated to determine the overall expert ratings and the level of agreement among them. This analysis helped to identify the strengths and weaknesses of the platform as perceived by the experts.

Qualitative Data Analysis. The qualitative data from the semi-structured interviews were analyzed thematically. This process involved several steps: 1). Transcription: The audio recordings of the interviews were transcribed verbatim. 2). Translation: the interviews were conducted in Mandarin Chinese. Translations were done to ensure consistency in data analysis. 3). Coding: The transcriptions were reviewed, and key themes and patterns were identified and coded. This involved highlighting significant statements and categorizing them into relevant themes. 4). Thematic Analysis: The coded data were then analyzed to identify recurring themes and insights. This process helped to provide a detailed understanding of the experts' perspectives on the platform's design, content, usability, and areas for improvement.

By combining these quantitative and qualitative data analysis methods, the study provided a robust evaluation of the "Mind Explorers" platform. This comprehensive approach ensured that both numerical ratings and detailed expert feedback were considered, offering a holistic view of the platform's effectiveness and potential areas for enhancement.

RESULTS

Mean Rating Score of Experts' Evaluation

Table 1. below is the mean rating score of 5 experts' evaluations. The majority of items have means ranging from 3.0 to 3.8, indicating that experts generally rated the platform as "*3=good*" to "*4=excellent.*" This suggests a positive reception of the platform's design and effectiveness. Items like "*Easy to understand*", "*Doesn't stray*", and "*Can give the correct response*" show high mean scores (3.8) with low SDs (0.40). This indicates strong agreement among experts that these aspects of the platform are effectively designed. "*Consistent*" and "*Easy to use*" also demonstrate good agreement with similar mean and low SDs. The lowest mean scores are observed in items such as "*Interesting design*" and "*In accordance with the function displayed*" (both at 2.6), with relatively higher SDs. This suggests not only lower ratings but also more variability in how experts perceive these elements, indicating potential areas for improvement. "*Sound-action correspondence*" has the lowest mean (2.2) and a low SD (0.40), reflecting a consensus that this feature is less effectively implemented. Items with mean scores around 3.0 but higher SDs (like "*Consistent navigation system*" and "*Attractive*" with SDs around 0.63) indicate more variability in expert opinions. This might suggest that perceptions of these features are more subjective or influenced by individual preferences or expectations.

Overall, the results show that the "Mind Explorers" platform is well-regarded by experts, especially in its usability and clarity of content. However, there are areas like design aesthetics and audio functionality where opinions vary more significantly, which could be focal points for further refinement to enhance the platform's appeal and functionality.

Table 1. Mean Rating Score of Experts' Evaluation

No.	Item	Mean	SD
i). INFORMATION DESIGN			
"Mind Explores" Content			
1	Easy to understand	3.8	0.40
2	Not too difficult	3.6	0.49
3	Structure of content based on constructive alignment model	3.6	0.49
4	According to syllabus (MOE Curriculum Standards)	3.4	0.49
Layout			
5	Language is easily understood	3.6	0.49
6	Build an understanding of the content	3.8	0.40
7	Content relates to students' existing knowledge	3.2	0.40
ii). INTERACTION DESIGN			
8	Doesn't stray	3.8	0.40
9	Contains instructions	3.8	0.40
10	Navigation is clearly represented	3.4	0.49
11	Desired sections easily reachable	2.8	0.40
12	Free control of sequences	3.6	0.49
13	Can give the correct response	3.8	0.40
14	Easy to use	3.6	0.49
15	Button functions are easily identifiable	3.8	0.40
16	Consistent navigation system	3.0	0.63
iii). PRESENTATION DESIGN			
17	Interesting design	2.6	0.49
18	User friendly	3.4	0.49
19	Balanced in terms of the composition of the elements	3.2	0.40
Graphics			
20	Attractive	2.8	0.40
21	Clearly represent the intended objects	3.0	0.63

22	Consistent	2.8	0.40
Font			
23	Clear	3.4	0.49
24	Easy to read	3.4	0.49
Colour			
25	Suitable	3.6	0.49
26	Attractive	3.0	0.63
27	Consistent	3.4	0.49
Audio			
28	In accordance with the function displayed	2.6	0.49
29	Does not disturb focus on content	2.8	0.40
30	Sound-action correspondence	2.2	0.40
Animation			
31	Interesting	3.4	0.80
32	Clear	3.6	0.49
Button			
33	Attractive	2.8	0.40
34	Easy to understand	3.8	0.40
35	Consistent	3.8	0.40
36	In accordance with the monitor display size	3.4	0.49

N=5

Experts' Views towards "Mind Explore"

Content Appropriateness and Engagement

Engaging Storytelling and Interactive Elements. Experts universally praised the platform's storytelling approach and game-based activities. The use of animal characters and relatable scenarios was highlighted as a particularly effective way to engage young learners and make abstract concepts more tangible. The narrative structure allows children to see themselves reflected in the stories, which enhances their emotional connection and retention of the material. One expert noted, "*The platform uses storytelling and game-based elements that capture children's attention. For instance, the narrative about animals in a school setting is a clever way to mirror real-life scenarios*".

Need for Real-Life Application. While the storytelling approach was commended, experts identified a need for more real-life applications. They suggested that integrating scenarios where children can practice emotional regulation in real-world contexts would enhance the learning experience. For example, incorporating interactive scenarios where children choose emotional responses and see the outcomes can help bridge the gap between theoretical knowledge and practical application. As one expert suggested, "*There's room to expand on how these emotions can affect one's behavior and interactions with others*".

Alignment with Educational Goals

Broad Alignment with Educational Objectives. The platform was acknowledged for aligning well with broad educational goals, such as self-awareness and emotional regulation, which are critical for early childhood development. An expert stated, "*The platform does an admirable job aligning with broad educational goals for mental health, particularly at the elementary level*". However, experts noted that the platform could be further enriched by aligning more closely with specific curriculum standards that detail the progression of skills at different developmental stages.

Incorporation of Resilience-Building Activities. Experts suggested that the platform could enhance its alignment with educational standards by integrating more resilience-building activities. These activities should focus on helping students not only recognize and understand their emotions but also develop strategies to respond to them resiliently. "*Integration of resilience-building activities could be enhanced to align more closely with specific curriculum standards,*" one expert recommended.

Usability and Accessibility of the Platform

User-Friendly Interface. The platform's interface was praised for its intuitiveness and clean design. Large, colorful icons and straightforward navigation make it easy for young learners to use. This user-friendly design is essential for maintaining student engagement and ensuring that they can interact with the content effectively. "*The platform is very intuitive, which is essential when dealing with young learners. The interface is clean and simple, icons are large and colorful, and navigation is straightforward,*" an expert commented.

Accessibility Improvements. Despite the positive feedback on usability, experts pointed out areas for improvement in accessibility. Suggestions included the addition of voice commands and audio descriptions for visually impaired students, as well as enhanced visual signals and subtitles for hearing-impaired students. Ensuring the platform is accessible on various devices, including tablets and smartphones, was also recommended to facilitate learning in different environments. An expert suggested, "*Ensuring that the platform is accessible on various devices, including tablets and smartphones, can help students access the learning material from anywhere*".

Suggestions for Improvement

Integration of Advanced Interactive Elements. Experts provided several suggestions for enhancing the platform's engagement and effectiveness. These included integrating more interactive elements such as virtual reality (VR) experiences, where students can navigate different scenarios, and artificial intelligence (AI) components that allow interaction with digital elements in the real world. Such technologies can make learning more immersive and engaging. "*Engagement can be significantly boosted by incorporating more interactive elements like VR and AI experiences,*" one expert noted.

Personalized Learning and Feedback Systems. Experts recommended the implementation of adaptive learning algorithms to personalize the learning experience based on individual progress and performance. This could include tailored challenges and content adjustments to better suit each student's needs. Additionally, a more structured feedback system, where students receive personalized advice and strategies based on their interactions, was suggested to enhance the instructional design. "*A more structured feedback system where students receive personalized advice or strategies based on their interactions would enhance the instructional design,*" an expert advised.

Parental and Community Involvement. Engaging parents and the broader community was highlighted as a crucial area for improvement. Experts suggested integrating a parent component that allows parents to monitor their child's progress and participate in activities designed for home use. This involvement can reinforce the skills learned and provide a supportive environment for emotional growth. "*Integrating a parent component could be beneficial. This would allow parents to see what their children are learning and perhaps even participate in activities designed for home use,*" one expert recommended.

Continuous Professional Development for Educators. Providing ongoing support and training for educators on the latest developments in child psychology and educational methodologies was recommended.

This would help teachers effectively utilize the platform and incorporate its tools into their broader teaching strategies. Creating a community or forum for educators to share experiences and strategies was also suggested to foster collaboration and continuous improvement. "*Providing teachers with ongoing support and training on the latest developments in mental health education can help them use the platform more effectively,*" an expert emphasized.

DISCUSSION AND CONCLUSION

The design and development of the "Mind Explorers" digital learning platform has yielded significant insights into the potential of integrating digital tools into mental health education for young learners. This study aimed to evaluate the effectiveness of the platform in enhancing mental health awareness among grade-2 students, drawing on expert evaluations to assess various aspects of its design, content, and usability.

The "Mind Explorers" platform received generally positive feedback from experts, with most aspects rated as "good" to "excellent." The storytelling approach, which uses a narrative about animals in a school setting to mirror real-life scenarios, was particularly appreciated for its ability to engage young learners. Experts emphasized that the game-based learning activities were well-suited for second graders, balancing simplicity with engagement to maintain students' interest.

Experts also highlighted the platform's alignment with educational goals, noting that it effectively addressed foundational concepts such as emotional awareness and regulation. However, some experts suggested that the alignment with specific curriculum standards could be enhanced by integrating more resilience-building activities.

Usability and accessibility were praised, with experts noting the intuitive interface, clear navigation, and attractive design elements. However, there were suggestions for improving inclusivity, such as ensuring accessibility across various devices and incorporating features for visually and hearing-impaired students.

Despite the positive feedback, this study has several limitations that should be acknowledged, such as sample size limitation. And the evaluation focused on a single unit of the "Mind Explorers" platform. Expanding the evaluation to include multiple units or a full academic term could provide a more thorough assessment of the platform's long-term impact on students' mental health awareness.

The "Mind Explorers" digital learning platform represents a promising approach to enhancing mental health awareness among young learners. By integrating storytelling, interactive activities, and gamification, the platform engages students and promotes essential skills such as self-awareness and emotional regulation. The positive feedback from experts highlights its potential as an effective educational tool. However, addressing the limitations of this study and exploring the recommendations for future research will be crucial for further improving the platform and ensuring its widespread impact. By continuing to innovate and refine digital learning tools, educators can better support the mental health and well-being of students, laying the foundation for their future success.

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