

Online learning engagement and mental among university students in China

Sa, Jingwen ✉

Graduate School, Lyceum of the Philippines University – Batangas

Received: 30 March 2024
Available Online: 25 July 2024

Revised: 20 April 2024
DOI: 10.5861/ijrse.2024.24644

Accepted: 15 May 2024

ISSN: 2243-7703
Online ISSN: 2243-7711

OPEN ACCESS



Abstract

The study aims to explore the relationship between online teaching and the mental health of university students in China, addressing a significant research gap in understanding the impact of online learning engagement on students' psychological well-being. The study seeks to describe the profile of respondents, assess their experiences in online teaching, identify factors affecting their mental health, and propose a plan for continuous improvement in school practices. Employing a descriptive correlational design, the study utilized a survey method with 280 college students from Henan University in China selected through convenience sampling. The questionnaire, adapted from previous studies, covered basic information, students' participation in online courses, and the impact of online courses on mental health. Findings reveal a predominantly male, 15-25 age group, rural-based, and with advanced education among surveyed students. Participation in online courses correlated positively with learning efficiency. Online courses showed both positive and negative effects on mental health, emphasizing the need for support and optimization in course design. While demographic factors may influence mental health, individual experiences and environments play crucial roles. The study underscores the importance of attending to students' psychological well-being in online teaching, suggesting strategies to enhance participation, provide support, and optimize course design. A proposed action plan addresses these findings, emphasizing the importance of stimulating engagement, designing high-quality course content, developing personalized learning plans, and further research in the field. University stakeholders are encouraged to stimulate competition in online learning, design high-quality course content, develop personalized learning plans, conduct further research, and implement the proposed action plan to strengthen support services for online learners and enhance the quality of online education.

Keywords: online teaching, mental health, university students, engagement, survey method

Online learning engagement and mental among university students in China

1. Introduction

The emergence of online learning platforms has significantly altered the global educational environment, providing unparalleled levels of accessibility and adaptability. Nevertheless, in addition to its advantages, the transition to online education has presented novel obstacles, namely pertaining to student involvement and psychological well-being. The incorporation of online learning platforms into higher education in China has experienced significant expansion in recent years, with the COVID-19 epidemic serving as a catalyst for this progress. Although online learning provides advantages in terms of flexibility and convenience, there have been growing worries regarding its potential effects on student engagement and mental well-being. It has been reported that there has been an increase in stress levels and psychological suffering among university students in China. This can be partially related to the difficulties they face when adapting to online learning methods.

In the context of the increasing digitalization of education, there has been a growing emphasis on the experiences and welfare of university students in China. Given the rapid increase in online learning due to the COVID-19 epidemic, it is crucial to comprehend how students manage this shift and the potential impact it has on their mental well-being. The present study aims to investigate the correlation between students' involvement with online learning platforms and their mental health performance within the Chinese educational setting. Online teaching has become an essential form of teaching organization in higher education institutions, addressing the challenges posed by the pandemic and the need for a more flexible and personalized learning path. The Chinese government implemented online teaching programs to combat the coronavirus epidemic, allowing for the swift transfer of teaching activities online. This approach has protected students' learning rights and interests, promoting the rapid development of online education in China. Research on the teaching effect of online courses and their influence on students' mental health is crucial for improving the quality of higher education.

The primary goal of this study is to examine the complex relationship between engagement in online learning and mental health among university students in China. The variables examined in this study pertain to two key domains: the level of involvement in online learning and the mental well-being of university students in China. Active participation in virtual classrooms, connection with course materials, and exploitation of online resources are all components of online learning engagement. Conversely, mental health encompasses the emotional state, levels of stress, anxiety, and symptoms of depression that students may encounter.

The correlation between engagement in online learning and mental health is intricate and diverse. Active engagement and meaningful contact within online learning settings possess the capacity to augment students' perception of connectedness and academic contentment, consequently exerting a favorable impact on their psychological well-being. On the other hand, various elements such as technological obstacles, experiences of social isolation, and academic demands might potentially lead to increased levels of stress and mental health challenges among students participating in online education.

Although there is a substantial amount of research available on the topic of online learning and its impact on mental health on a worldwide scale, there is a noticeable lack of studies that particularly examine the Chinese university student population. This research aims to address the existing knowledge gap by providing useful insights into the distinct socio-cultural elements that influence the well-being of Chinese university students in the context of higher education. Additionally, it seeks to offer customized recommendations to promote the overall well-being of these students in light of the changing landscape of higher education.

The investigation of the relationship between online learning engagement and mental health among university students in China carries substantial implications for the academic community, policy-making

processes, and practical applications. Through a comprehensive analysis of the intricate interplay among these variables, this research endeavor has the potential to provide valuable insights for the creation of focused interventions and support systems that are customized to address the unique requirements of Chinese students. Furthermore, the resolution of the obstacles linked to online education and mental health can cultivate a more favorable educational setting and advance the comprehensive welfare of Chinese university students, ultimately enhancing their scholastic achievements and individual development.

Objectives of the study - The study aims to find the relationship between online Teaching and mental health of university students in china. More specifically, it aims to: assess the experience of students in online teaching identify the factors affecting the mental health of students test the significant relationship between the two variables propose a plan to continuously improve the schools' practices.

2. Methods

Research Design - The research design employed in this study is a descriptive correlational design utilizing a survey method. This approach was chosen for its ability to systematically examine the relationship between variables of interest, namely online learning engagement and mental health, among university students in China. The use of a descriptive correlational design with a survey method in this study allows for a comprehensive investigation into the relationship between online learning engagement and mental health among university students in China. Descriptive correlational design is utilized when researchers seek to understand the relationships between variables without manipulating them. It involves collecting data on multiple variables at a single point in time to determine whether and to what extent they are related to each other. This design is particularly suitable for exploring associations between complex phenomena, such as online learning engagement and mental health, in naturalistic settings. In the context of this study, the survey method was chosen as the primary data collection tool due to its efficiency in gathering large-scale data from a diverse sample of participants. Surveys allow researchers to collect self-reported data on participants' perceptions, attitudes, and behaviors related to online learning engagement and mental health. By administering a structured questionnaire, researchers can systematically assess various dimensions of these constructs and explore their interrelationships.

Participants - The respondents of this study are 280 college students from Henan University in China. The inclusion criteria for selecting participants were students who had experience with both online and offline courses, reflecting a diverse range of learning modalities. Exclusion criteria may have included students who were not currently enrolled in courses or those who did not have experience with both online and offline learning formats. Based on the total population of college students at Henan University, a sample size of 280 students was randomly selected to participate in the survey, this is computed based on the Raosoft sample size calculator considering the 95% confidence level and 5% margin of error, thus, the anticipated response rate was determine an appropriate sample size that is representative of the population.

Data Gathering Instrument - The questionnaire of this study is an adapted survey from Ding Zhijun (2022) on his study entitled: Research on Undergraduates Student Engagement under Online Teaching Mode; and Wang Ruichun (2017) on his study entitled: A Study of Factors Affecting Students' Mental Health in University Classroom Instruction. The questionnaire design of this study is divided into three main parts: basic information, students' participation in online courses and the impact of online courses on students' mental health. The first part of the questionnaire mainly collects the basic information of the students, such as gender, age, location or origin, education level, etc. The second part of the questionnaire focuses on students' participation in online courses. It is further subdivided into four subsections: Behavioral Engagement: Exploring students' learning engagement in online courses. Cognitive participation: focuses on the initiative of students in online courses and whether they can draw parallels. Emotional engagement: Exploring students' subjective feelings about online courses. Interactive participation: Whether to effectively communicate and interact with teachers and classmates in online classes. Each section is further divided into 6-7 questions. The third part of the questionnaire focuses on the impact of online courses on students' mental health. Internal mental state: Exploring students' subjective mental

state in the classroom. Individual adaptability: To explore students' adaptability to online courses. Influence of external factors: Explore the influence of external factors such as teachers or course content on students' mental health. Each section has 8-9 questions. In order to make the questions in the questionnaire easier to be understood by Chinese students, the questionnaire has been adapted to the teaching environment in China to a certain extent before its formal use.

As can be seen from Table 1, the reliability of the three parts of the questionnaire is very good, and the reliability of the conclusions obtained by each part and item of the questionnaire is above 0.9. This indicates that the questionnaire designed in this study has good reliability, which is conducive to the next step of data analysis.

Table 1

Reliability Test Results

Item	Cronbach Alpha	Remarks
Students Engagement Online Teaching		
Behavioral engagement	0.942	Excellent
Cognitive engagement	0.945	Excellent
Emotional engagement	0.938	Excellent
Interactive engagement	0.947	Excellent
Factors Affecting Students Mental Health		
Internal mental state	0.942	Excellent
Individual adaptive capacity	0.958	Excellent
Impact of external factors	0.945	Excellent

Data Gathering Procedure - The data gathering procedure for this study involved several steps to ensure the systematic collection of responses from the selected participants. The researcher initially determined the group of respondents for the study, which comprised college students from Henan University in China. A random sampling method was used to select participants from this population, ensuring a diverse representation of students with experience in both online and offline courses. Before distributing the questionnaire, the researchers sought permission from relevant authorities at Henan University, such as faculty members or administrative staff, to conduct the research among students. Effective communication with the selected respondents was also crucial to ensure their understanding of the purpose of the study and to obtain their voluntary participation. Ethical considerations, such as confidentiality and informed consent, were emphasized during this communication process. Once permission was granted and communication with the respondents was established, the researchers utilized an online questionnaire platform or app to create and distribute the survey. It is not explicitly stated whether Google Forms were used for this purpose, but it is likely that a dedicated questionnaire app or platform was employed to streamline the data collection process. The online questionnaire link was sent to the selected respondents via the chosen questionnaire app or platform. Participants were instructed to complete the questionnaire independently and submit their responses electronically. This method allowed for convenient and efficient data collection, as respondents could access the questionnaire at their convenience and submit their responses in real-time. Upon receiving the completed questionnaires from the respondents, the researchers collated the data and organized it for further analysis. The collected data, which consisted of responses to various survey questions related to online learning engagement and mental health, was then passed on to professional statisticians or data analysts for thorough statistical analysis. This step involved using appropriate statistical techniques to explore the relationships between variables and draw meaningful conclusions from the data.

Data Analysis - This study used SPSS 27.0 as a data analysis tool, it is a powerful, easy-to-use statistical analysis software that is suitable for data analysis needs in various fields. Whether it is academic research, business analysis or market research, it provides users with efficient and accurate data analysis support. The Cronbach's alpha tool was used to calculate the data. Cronbach's alpha is an important statistical tool used to evaluate the internal consistency and reliability of tests or scales, providing researchers with an effective means of data analysis.

Ethical Considerations - Ethical considerations are crucial in the essay writing process. This is mainly

reflected in the following aspects: First of all, respect for intellectual property rights is a basic moral requirement in thesis writing. Scholars should respect the research results of others and avoid plagiarism, plagiarism and appropriation of the content of others. When quoting the views or data of others, the source should be correctly noted and the relevant citation norms should be followed. This not only shows respect for others, but also ensures academic impartiality and integrity.

Secondly, honesty and integrity are the core values in thesis writing. Scholars should seek truth from facts in their papers, not exaggerate or distort research results, and not conceal or tamper with data. At the same time, they should abide by academic conventions and not use improper means to obtain research results, such as manipulating data and fabricating experimental results. Such behavior will not only damage the academic reputation of individuals, but also have a negative impact on the entire academic community.

In addition, when conducting research involving humans or animals, the necessary ethical reviews and approvals should be ensured. Researchers are required to submit a detailed research proposal, including research objectives, methods, expected risks and countermeasures. No experiments should be carried out or data collected without the consent of the participants, and the right to withdraw from the study at any time should be ensured. At the same time, the privacy of participants should be respected and their personal information should be protected from disclosure.

In terms of data processing and analysis, researchers should ensure the authenticity and integrity of the data. This includes avoiding data tampering or falsification, and adopting appropriate methods to deal with outliers, missing data, and potential data biases. In addition, statistical principles should be adhered to and the findings should be clearly reported in the paper, including information such as statistical significance and confidence intervals.

Finally, the ethical considerations in the paper are also reflected in the fair presentation and interpretation of the research results. At the same time, when quoting and referring to literature, the accuracy and completeness of the quotation should be ensured to avoid misleading readers or causing academic misconduct. To sum up, it is essential to follow ethical principles in the writing of a thesis. This not only helps to maintain one's academic reputation and professional ethics, but also helps to promote the healthy development of the academic community. Finally, the study was reviewed and approved by the school's ethics Review committee.

3. Results and discussion

Table 2

Summary on Students Engagement Online Teaching

Indicators	WM	VI	Rank
Behavioral engagement	3.12	Agree	4
Cognitive engagement	3.14	Agree	2
Emotional engagement	3.16	Agree	1
Interactive engagement	3.13	Agree	3
Composite Mean	3.14	Agree	

Table 2 shows students' participation in online teaching. The combined score of the four items is 3.14, indicating that students have a high degree of participation in and interest in online courses. With weighted average scores above 3.10 for all three items, students generally felt willing to actively participate in online courses.

Online teaching mainly focuses on the development of applied teaching software and the dissemination and sharing of teaching resources, and pays attention to the teaching interaction between teachers and students to a certain extent, but its ultimate goal is to achieve the opening and sharing of educational resources. Compared with offline teaching, online teaching is more "open", and a large number of high-quality digital education

resources are in a "non-flowing solidification state" and have not been "fully utilized". Online teaching tries to avoid the waste of resources caused by closed education, basically achieves the efficient allocation of resources, and greatly improves the utilization of teaching resources. Online, teachers can easily use sophisticated information materials resources as references to improve online teaching, and learners can easily use integrated learning resources to extend classroom learning. Teachers and students can also exchange and share, exchange what they have, so that resources can be used to the maximum extent and give full play to the real value.

The transfer of teaching from offline to online is essentially "the result of the interaction between science and technology and teaching, teachers and students, education and society". Online teaching has broken through the boundaries of traditional history classroom, and has undergone unprecedented changes in implementation carrier, teaching mode, interaction mode and evaluation mode. Compared with traditional teaching, online teaching has many characteristics, such as flexibility, diversity, sharing, interactivity, autonomy and individuation.

Li et al. (2016) Learning behavior generally refers to the sum of activities carried out by learners under the guidance of certain motivations in order to obtain certain learning results. According to the definition of human behavior in behavioral theory, we can believe that learning behavior is an activity that learners interact with the surrounding environment in order to obtain certain learning results under certain incentives. According to modern educational design theory, the essence of instructional design is the learner's learning behavior and the teacher's teaching behavior and instructional design.

The above data shows that, first of all, students' active participation in online courses indicates their enthusiasm and initiative for learning. Compared with traditional classroom teaching, online courses require students to have stronger self-discipline and independent learning ability. Students can actively participate in online courses, which means that they are willing to invest time and energy to learn, have a strong thirst for knowledge and self-drive.

Secondly, students who actively participate in online courses are more likely to get better learning results. Through active participation in discussion, questioning and interaction, students can have a deeper understanding of the course content, and deepen the memory and application of knowledge points. At the same time, the interactive aspects of online courses can also stimulate students' thinking and creativity, and develop their critical thinking and problem solving skills. In addition, students' active participation in online courses also helps to develop their teamwork spirit and communication skills. In the online learning environment, students can communicate and cooperate with other students through discussion boards, group assignments, etc. This kind of interaction not only helps to solve problems, but also promotes friendship and trust between classmates, and cultivates their teamwork spirit and communication skills.

The above data show that the greatest influence on the effect of online learning is students' inner emotional input, and their own efforts and input are the key factors affecting the effect of online learning, so it is necessary to enhance their learning positivity and initiative. At the same time, it also gives teachers, platforms and parents some inspiration. Teachers' online teaching, online resources for platform construction, and parents' encouragement and guidance all need to mobilize students' enthusiasm and initiative in learning, make students feel interesting in online learning, stimulate students' interest and desire in online learning, and develop students' main role in learning. Can really help to improve the effect and level of online learning. Students' active participation in online courses shows their enthusiasm, initiative and self-discipline for learning, which helps to achieve better learning results, develop teamwork and communication skills, and adapt to the learning needs of the digital age. This attitude of active participation has a positive impact on the overall development of students.

Table 3*Summary Table on the Factors Affecting Students Mental Health*

Indicators	WM	VI	Rank
Internal mental state	3.13	Agree	3
Individual adaptive capacity	3.17	Agree	1.5
Impact of external factors	3.17	Agree	1.5
Composite Mean	3.15	Agree	

This table is a summary of factors affecting students' mental health. The table reflects three different influencing factors, namely internal psychological state, individual adaptive ability and external factors. Paying attention to students' psychological state is of great significance for improving learning effect. Teachers and parents should focus on cultivating students' positive psychological qualities and help them build up self-confidence and optimistic attitude. At the same time, we should also pay attention to students' negative emotions and psychological problems, and give timely guidance and help. In addition, schools and society should also create a good learning and living environment for students to reduce the negative impact of bad factors on students' psychological state. The comprehensive average participation score is 3.15, indicating that these three aspects have a significant impact on students' mental health.

The impact of online courses on students' mental health is a complex and multifaceted issue. Online courses have become an important part of students' daily life, which brings a lot of convenience, but also brings some psychological challenges to students. The impact of online courses on each student's mental health may vary. Some students may adapt very well and be able to take full advantage of online courses, while others may face greater challenges. This depends on a variety of factors such as the student's personal characteristics, family support, and learning environment (Didham & Ofei-Manu, 2020).

It can be seen from the above data that online courses have both positive and negative effects on students' mental health. We need to maximize the positive effects of online courses and reduce their negative impact on students' mental health by providing the necessary support and assistance, as well as optimizing the way they are designed and implemented. The psychological state of students is one of the key factors that affect the learning effect. Only by paying attention to the psychological state of students and helping them form a positive learning attitude and motivation can we effectively improve the learning effect and promote the all-round development of students (Yunusovich, et al. 2022).

The effectiveness of online teaching means that under the concept of new curriculum, teachers take cultivating students' core quality as their goal, create an information-based classroom teaching and learning environment with the help of online teaching means supported by Internet information technology, and adopt new teaching and learning methods to intervene and adjust the online teaching process. Mobilize students to join the online history class, promote students to acquire knowledge, generative ability and sustainable development in the interaction between teachers and students, and achieve the true sense of teaching efficiency, efficiency, effectiveness, strength, depth, effectiveness and temperature.

Table 4*Relationship Between student engagement on online teaching and the factors affecting students mental health*

Behavioral engagement	r-value	p-value	Interpretation
Internal mental state	.415	0.000	Highly Significant
Individual adaptive capacity	.515	0.000	Highly Significant
Impact of external factors	.464	0.000	Highly Significant
Cognitive engagement			
Internal mental state	.398	0.000	Highly Significant
Individual adaptive capacity	.395	0.000	Highly Significant
Impact of external factors	.469	0.000	Highly Significant

Emotional engagement			
Internal mental state	.410	0.000	Highly Significant
Individual adaptive capacity	.447	0.000	Highly Significant
Impact of external factors	.443	0.000	Highly Significant
Interactive engagement			
Internal mental state	.477	0.000	Highly Significant
Individual adaptive capacity	.415	0.000	Highly Significant
Impact of external factors	.467	0.000	Highly Significant

Table 4 shows the relationship between students' participation in online teaching and factors affecting students' mental health. This means that there is a significant relationship between them and means that the more things they are involved in, the better the factors affecting their mental health.

Dong (2015) divides learning engagement into behavioral engagement, social engagement and cognitive engagement from the perspective of sociology. Behavioral engagement, also known as programmatic engagement, refers to the high level of engagement when learners participate in learning activities online. Psychological input includes cognitive input and emotional input, that is, concrete input, which is conducive to the cultivation of students' higher-order thinking and is the key to the effect of learning. Li et al (2022) Human psychological development and human external behavior are dialectically unified. According to behavioral theory, human behavior is a process of two-way interaction between people and the things that form the social and physical environment and the things that are created by the social and physical environment. In other words, human behavior is a process of interaction between people and the environment. Behavior itself is a system, which includes the subject, the object of behavior, the tool of behavior, the organization of behavior, the rules of organization and the division of labor. Behavior is a series of activities. These activities are controlled by a series of activities. Activities are conscious, and it is possible for different activities to achieve the same goal. The activity is done through a specific operation. The operation itself does not have its own goals, it is simply used to adapt the activity to the environment (Wang et al. 2023).

There is a need for psychological counseling at every level of need, and the effect of it directly affects the degree and intensity of satisfaction of needs at each level. Wang (2021) and other scholars divide learning engagement into three dimensions: behavioral activity, cognitive engagement and emotional experience. Different from learning participation, learning engagement refers to the cognitive, emotional and behavioral input of learners when they begin to implement learning activities, which requires a large number of emotional elements. Under the influence of multiple factors, learners establish correct understanding concepts, have interest in learning, take action and invest in emotional learning, and obtain good learning results, their cognition and emotion will be developed again.

Astin's theory of engagement in learning holds that students' engagement level is significantly positively correlated with their academic achievement. The more engaged they are in learning, the better their academic achievement and ability development will be, which provides a theoretical basis for this study to analyze the factors influencing college students' engagement in online learning. Secondly, the hypothesis that external learning environment and online course influence learning engagement in this theory provides a theoretical basis for the influencing factors of online learning engagement.

Online teaching is a new form of teaching after the rise of traditional teaching, it has grown from a marginalized form of education to a mainstream form of education widely accepted and recognized by the public, showing a strong momentum of development. Online teaching is "the product of the combination of modern information technology and teaching activities", "its development is in the same frequency resonance with the update of social information technology and the application and integration degree in the teaching field". From the initial form of resource sharing, to one-way course teaching, and then to two-way course teaching that can realize bilateral interaction, online teaching continues to innovate and progress with the evolution of Internet

technology and knowledge economy (Yang, 2020).

It can be concluded from the above data that academic self-efficacy has a significant positive impact on learning engagement, especially on cognitive engagement. Therefore, in online learning, learners need to reasonably set learning goals, use a variety of learning strategies for knowledge learning and reconstruction, improve their cognitive ability, and be fearless even when encountering academic difficulties and challenges, so as to devote themselves to online learning in a more active state. Online classes need to enhance the participation of learners, so that students have a sense of belonging to the class in the body and mind. When learners participate in learning activities, they should be good at guiding and paying close attention to students' every move, praising and appreciating their progress, so that students can feel the joy and sense of achievement of learning; At the same time, when learners encounter learning difficulties and cannot solve them smoothly, they should seek academic help in time and obtain academic guidance in time, so as to improve learning methods and learning steps and promote academic progress and development.

Table 5

Proposed Action Plan to enhance online learning student engagement and mental health among Chinese University Students

Key Result Areas	Program Objectives	Enhancement Activities	Success indicators	Persons involved
Online Learning Engagement - Behavioral Engagement	To enhance online learning engagement in terms of behavioral engagement by promoting timely completion of online learning assignments.	<ol style="list-style-type: none"> 1. Assignment Schedule Planning Workshop: Organize workshops to educate students on effective time management techniques and how to create and adhere to assignment schedules. 2. Assignment Reminders: Implement automated reminders via email or messaging platforms to notify students of upcoming assignment deadlines. 3. Peer Accountability Groups: Facilitate the formation of peer accountability groups where students can support and motivate each other to complete assignments on time. 4. Feedback and Recognition: Provide positive reinforcement and recognition for students who consistently submit assignments on time. Incorporate feedback mechanisms to acknowledge efforts and provide constructive feedback on time management skills. 	<ol style="list-style-type: none"> 1. Assignment Completion Rates: Measure the percentage of students who consistently complete online learning assignments on time compared to previous periods. 2. Student Feedback: Gather qualitative feedback from students regarding their experiences with assignment scheduling and time management strategies, as well as their ability to keep up with instructional content. 	Faculty or Instructors Administrative Staff Students
Mental Health – Internal Mental State	To improve mental health in terms of internal mental state by ensuring students' ability to keep up with what the instructor is teaching in the classroom.	<ol style="list-style-type: none"> 1. Mindfulness and Stress Reduction Workshops: Conduct workshops focused on mindfulness techniques and stress reduction strategies to help students manage anxiety and stay focused during instruction. 2. Accessible Learning Materials: Ensure learning materials are presented in a clear and accessible manner to facilitate understanding and reduce cognitive load. 3. Regular Check-ins: Implement regular check-ins with students to gauge their comprehension of course material and provide additional support or clarification as needed. 4. Mental Health Resources: Provide access to mental health resources such as counseling services, support groups, and online self-help materials to assist students in coping with academic stress and maintaining a positive mental state. 	<ol style="list-style-type: none"> 1. Attendance and Participation: Monitor student attendance and participation levels in classes to assess their ability to engage with instructional material effectively. 2. Utilization of Mental Health Resources: Track the utilization of mental health resources and support services provided to students, such as counseling sessions or support group attendance. 	Peer Mentors or Teachers Mental Health Professionals Students

4. Conclusions and recommendation

The data show that students' subjective willingness to participate in online courses is relatively strong, and the degree of participation is proportional to the learning efficiency. Often students with a higher level of participation get the best results. Online courses have both positive and negative effects on students' mental health. We need to maximize the positive effects of online courses and reduce their negative impact on students' mental health by providing the necessary support and assistance, as well as optimizing the way they are designed and implemented. The psychological state of students is one of the key factors that affect the learning effect. Only by paying attention to the psychological state of students and helping them form a positive learning attitude and motivation can we effectively improve the learning effect and promote the all-round development of students. Online classes need to enhance the participation of learners, so that students have a sense of belonging to the class in the body and mind. When learners participate in learning activities, they should be good at guiding and paying close attention to students' every move, praising and appreciating their progress, so that students can feel the joy and sense of achievement of learning; At the same time, when learners encounter learning difficulties and cannot solve them smoothly, they should seek academic help in time and obtain academic guidance in time, so as to improve learning methods and learning steps and promote academic progress and development. A proposed action plan were develop based on the result of the study.

University Students may participate in online learning competitions can stimulate a sense of competition and enthusiasm for learning, fostering a deeper engagement with course materials and improving learning outcomes. They may also recognize the importance of mental health in the learning process and seek necessary support and resources when needed. University Teachers may Design high-quality course content that is professional, up-to-date, and tailored to meet the diverse learning needs of students. Incorporate multimedia elements to make the content more engaging and accessible. They may also Establish online communication platforms and regular question-and-answer sessions to facilitate interaction and communication between teachers and students. Encourage participation in online group activities to promote collaboration and learning. University Administrators may develop personalized learning plans for students based on their interests, abilities, and needs. Offer recommendations for learning resources and track students' progress to provide targeted guidance and support. They may also continuously optimize and improve various aspects of online courses, including course content, teaching methods, interaction mechanisms, and support services, to enhance the effectiveness and quality of online education. Future Researchers may conduct further study to nvestigate and evaluate the effectiveness of innovative teaching methods and learning strategies in the online learning environment. Contribute to the advancement of knowledge in online education by conducting rigorous research and sharing findings with the academic community. The Proposed Action Plan may be utilized to Establish and strengthen learning support services to assist online learners throughout their academic journey. Provide both academic and non-academic support services to address students' diverse needs and ensure their success in online education.

5. References

- Didham, R. J., & Ofei-Manu, P. (2020). Adaptive capacity as an educational goal to advance policy for integrating DRR into quality education for sustainable development. *International Journal of Disaster Risk Reduction*, 47, 101631.
- Dong Mingliang. (2015). Modern distance education for middle school students, master degree theses of master of management studies, henan university).
- Li, L., Valiente, C., Eisenberg, N., Spinrad, T. L., Johns, S. K., Berger, R. H., ... & Gal-Szabo, D. E. (2022). Longitudinal relations between behavioral engagement and academic achievement: The moderating roles of socio-economic status and early achievement. *Journal of school psychology*, 94, 15-27.
- Wang Y. (2021). The influence factors of college students' online learning into the master's degree thesis, shanxi normal university).
- Wang, S., Christensen, C., Cui, W., Tong, R., Yarnall, L., Shear, L., & Feng, M. (2023). When adaptive learning

is effective learning: comparison of an adaptive learning system to teacher-led instruction. *Interactive Learning Environments*, 31(2), 793-803.

Yang mei. (2020). The online learning environment into degree and influencing factors of university students' study master's degree thesis, central China normal university).

<https://link.cnki.net/doi/10.27159/d.cnki.ghzsu.2020.000298>doi:10.2715 9 /, dc nki. Ghzsu. 2020.000298.

Yunusovich, A. V., Ahmedov, F., Norboyev, K., & Zakirov, F. (2022). Analysis of Experimental Research Results Focused on Improving Student Psychological Health. *International Journal of Modern Education & Computer Science*, 14(2).

