Enhancing Classroom Participation Through OMO Learning Mode

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Abstract. Facing the problem of low participation in traditional classroom, guiding students to actively participate in the classroom and improving their classroom participation have a very positive impact on improving the efficiency and quality of classroom learning. Based on the development direction of digital-enabled education quality improvement, this paper introduces the Online-Merged-Offline (OMO) learning mode, and gives the paths to improve students' classroom participation from different dimensions of classroom participation respectively. It also investigates the "teachers' and students' information literacy preparation" and the configuration of the current classroom environment based on the classroom OMO learning model, combining the main elements of the "OMO learning model", and then concludes that the conditions for the application of OMO learning to teaching are already in place.

Keywords: OMO, Classroom Participation, Informationize.

1   Introduction

Student participation in the classroom is a fundamental guarantee of high-quality learning.[1] The limitations of traditional large class sizes and inherent teaching models limit students' better participation in the classroom. Bidding farewell to monologue and indoctrination and moving towards dialogue and research is the basic direction of China's teaching reform. [2] At present, China's education development is facing an important issue of transformation from "extension development" characterized by scale expansion and space expansion to "connotative development" with quality improvement as the core. [3] The move away from the traditional quantitative 'indoctrination' in the classroom to the qualitative "participation" in the classroom is also in line with this. Nowadays, with the high penetration of information technology, there are a large number of relevant studies and successful cases of enhancing the quality of education through information means. Therefore, it is also valuable to discuss the elimination of unfavorable factors of students' participation in the classroom and the improvement of classroom participation by means of information technology.

2   The Meaning and Status of Classroom Participation

2.1   The Meaning of Classroom Participation

Participation is a positive image that portrays effortful learning through interaction with the teacher and classroom learning opportunities. [4] Learning participation is a basic form of active and continuous involvement of learners in teaching and learning activities, and there is more than one-sided behavioral participation of learners, but also involves multi-dimensional integrated cognitive and emotional participation. [5] Therefore, this study considers Classroom Participation as a quantitative term used to describe the extent of students' engagement behaviors under the effect of multiple factors.

2.2   The Status of Classroom Participation

In the long-term large-class teaching and teacher-led lecture-type classroom model, students have a very weak sense of classroom participation. The traditional classroom has the problem of insufficient interaction and low participation.

The Traditional Large Classroom Teaching Classroom, Time and Space Resources are Strained.
    The attributes of the world's most populous country predispose us to the choice of size for conducting large classes. This inevitably leads to the allocation of time and space resources in our traditional classrooms, where one teacher faces a large number of students with many needs. As a result, it is difficult to pay attention to and enhance the students' participation in the classroom and the extent of their participation.

The Unidirectionality of Classroom Information Presentation.
    Teachers emphasize "teaching" and "indoctrinate" students with teaching content. [6] 'PPT + projector' is the most common teaching mode in modern traditional classrooms. In this mode, the main role of teaching media is to present information. Excessive attention is paid to the teacher's "teaching", ignoring the students' main position in teaching. The interaction between teachers and students in the classroom mainly stays at the level of simple body language, and it is basically a one-way interaction with less emotional communication. Teachers become the complete creator and controller of the classroom, and students can hardly think and create independently.

Students Lack a Sense of Security in Classroom Participation.
    The long-existing unequal teacher-student relationship in education makes the authority of the teacher too enlarged, and the teacher becomes the absolute 'spokesman', while the students are in a very passive position, and the students' participation in the classroom is always hovering in the 'right or wrong'and 'fear of criticism' and other concerns, with negative emotions and insecurity. Students' participation in the classroom is always hovering in the concern of 'right or wrong', 'fear of being criticized',

and so on, and they have negative emotions and no sense of security in the classroom participation.

2.3   The Value of Enhancing Classroom Participation

Meaningful learning occurs when students are engaged. [7] The depth and quality of participation can have a significant impact on the level of learner knowledge acquisition and the level of knowledge transfer. [8] Participation in the classroom is an important way to enhance learning. Therefore, enhancing classroom participation has multiple values.

3   Analysis of the Paths to Enhance Classroom Engagement through OMO Learning

3.1   Connotation of OMO Learning Mode

Online Merge Offline Learning Mode abbreviated as OMO Learning Mode, OMO refers to the provision of online and offline learning spaces for learners to fulfill their learning needs anytime and anywhere. [9] It is an important form of future educational development. [10] It is considered as the next stage of development of blended. Therefore, this study considers the convergent teaching mode as a new blended learning mode that can integrate the dual overlay of online and offline learning spaces and realize seamless switching between online and offline.

According to Yuefen Wang's design of the elements of Online-Merge-Offline Instruction, OMO Instruction has access to digital resources, data analysis and diagnosis, evaluation accompaniment, teacher collaboration and other elements, and the role of teachers and students in the traditional offline teaching and learning will be changed and requirements. [11] The main elements of the OMO Learning mode are thus designed (see Fig. 1.), from which the main differences and changes between the OMO Learning mode and the traditional teaching mode can be seen. In addition to having the basic traditional teaching elements, OMO Learning mode also supports multiple teachers and students to participate in the classroom, provides more online resources, supports multiple evaluations, provides intelligent data analysis, and has multiple channels of classroom participation through information technology.
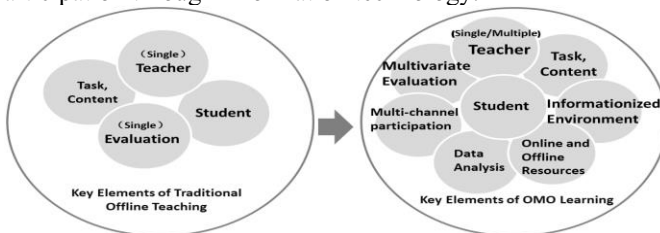

Fig. 1. Diagrammatic representation of the main elements of OMO Learning mode

3.2 Analysis of the Paths to Enhance Classroom Engagement through OMO Learning

According to Kong Qiping's research on the three dimensions of classroom participation (behavioral participation, emotional participation, cognitive participation). [12] This study attempts to enhance classroom engagement from different aspects of the classroom participation dimensions through OMO Learning mode by increasing the channels for students to participate in the classroom, empowering students to participate in the classroom, and eliminating the negative emotions of students' participation in the classroom.

Changing the Mechanical Way of Learning in Traditional Teaching and Improving the Sense of Participation.

In order to practice the concept of student-oriented education, the "one-way transmission" of knowledge and skills in the classroom should be abandoned in favor of the provision of assistive technologies and tools for students to cultivate students' awareness of active exploration and information exchange. OMO Learning mode through the offline superimposed on the informationization of the online classroom, can empower more students to participate in the right to change the students "just listen carefully" inherent classroom awareness. It allows students to understand that the classroom belongs to everyone; it allows students to realize that they should participate in the classroom; and it allows students to have the opportunity to actively participate in the classroom.

Increased Interaction Channels for Behavioral Engagement.

Sticking to the emphasis on how to use information technology to assist teachers in teaching, assist in the presentation of teaching content, these can not jump out of the information "one-way transmission" of the dilemma. From a different perspective, from the perspective of optimizing classroom aids for students, increasing the channels for students to participate in the classroom, so that students have access to and can make use of information tools, to a certain extent, can enhance students' behavioral participation in the classroom, breaking the "one-way transmission" of information dilemma. OMO learning mode allows students to utilize information tools that can be accessed in the online classroom, and creates an online environment where teachers and students can communicate with each other on the basis of the traditional offline classroom, thus connecting students to both online and offline spaces. alleviating the time and space resources of large-class teaching; guaranteeing and broadening students' classroom participation channels.

Creating a Classroom Environment that Guarantees Emotional Involvement.

Emotional support is critical to whether or not students actively participate in the classroom. Creating a relaxed, inclusive classroom environment helps students receive the emotional support they need to participate in the classroom. OMO learning mode provides students with multiple channels to participate in the classroom, which is not

limited to the time and space of the classroom. Real-time pop-ups in class and online communication after class. It helps students to better overcome introversion and timidity, eliminates the burden of "right or wrong", and gives them a sense of security and equality in classroom participation.

**Supply of Online Resources to Guide Cognitive Engagement.**

Simple classroom responses and rote memorization stop at shallow levels of behavioral participation, while deeper acts of participation require students to take the initiative to think and create. OMO Learning informs the traditional classroom and provides students with massive learning resources. Students are able to obtain timely and powerful materials to support and confirm the reliability of self-conjectures. Students are allowed to think, express and create more in the process of classroom participation.

4   Feasibility Analysis of OMO Learning based on the Current Situation

4.1   Information Literacy Questionnaire for Teachers and Students Based on the Conduct of OMO Learning

The study selected the second grade of an urban school in Southwest China to distribute the "Teacher and Student Information Literacy Questionnaire" to analyze the feasibility of OMO Learning through the investigation of the current status of teacher and student information literacy. The questionnaire was distributed to 203 teachers and students, of which 173 students received 147 valid questionnaires, with 85% validity, and 30 teachers received 30 valid questionnaires, with 100% validity. Classroom observation was also carried out for two months, and the following relevant data were obtained and analyzed. The results are as follows:

The survey on students' information literacy shows that (see Fig .2.) more than 86% of the students indicated that they had experience in pure online classroom learning; only 3% of the students indicated that they didn't have their own online learning equipment, but still indicated that they had no less than one kind of online channel; more than half of the students had relevant experience in the blended learning mode; among the choices of the different learning modes, 51% indicated that they preferred "online + offline" blended learning mode, 20% preferred pure online learning, and only 26% preferred traditional offline classroom. Among the choices of different learning modes, 51% of the students indicated that they preferred the "online + offline" blended learning mode, while 20% preferred pure online learning and only 26% preferred the traditional offline classroom.
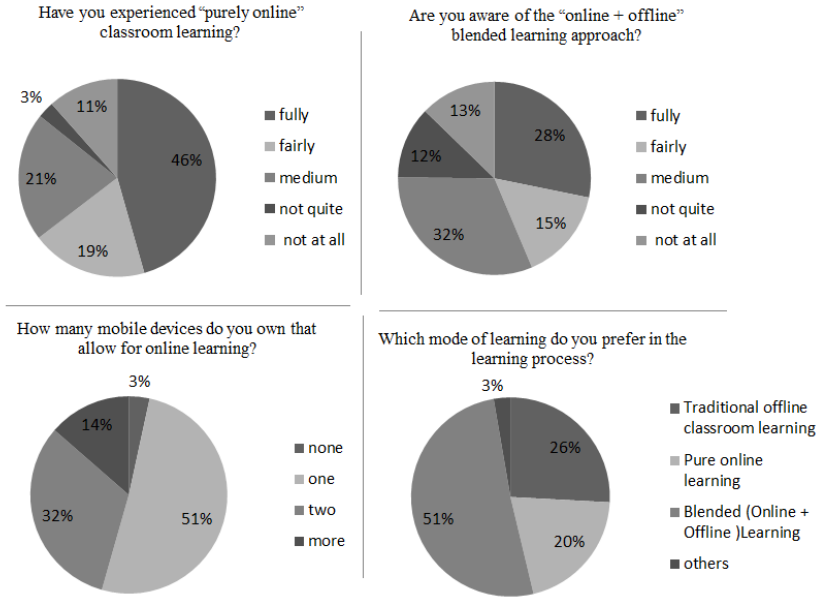
Fig. 2. Current status of the survey on 'Students' preparation for information literacy' in the context of OMO Learning

The survey on teachers' information literacy shows that (see Fig. 3.) of the 30 teacher questionnaires in the school, more than 80% of the teachers (70% more compliant, 20% more compliant) indicated that they preferred to use multimedia for classroom teaching; the same more than 80% of the teachers (57% very compliant, 33% more compliant,) indicated that they were more skillful in operating multimedia for daily teaching; the participating questionnaires of All teachers indicated that they had experience in online teaching, and although most of them were not satisfied with the effect of online teaching compared with traditional offline teaching, they still indicated that they were willing to try new teaching modes and introduce more informatization means.
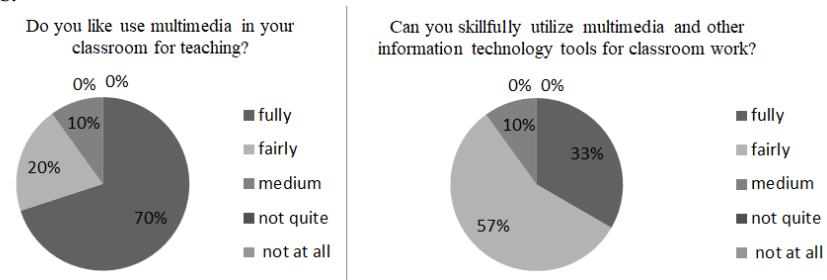
Fig. 3. Current status of the survey on 'Teachers' Information Literacy Preparation'for OMO Learning

School classroom infrastructure: The regular classrooms in this school are equipped with multi-functional whiteboards, projection booths and networks.

4.2   Feasibility Analysis of Conducting OMO Learning

Based on the questionnaire survey of the existing 'information literacy readiness of teachers and students' and the configuration of the current teaching and learning environment, combined with the main elements of the OMO Learning mode (see Fig.1.), the following analysis was obtained:

Environmental Preparation.
    The development of online teaching and blended learning has laid a good foundation of hardware and software facilities for the integrated teaching mode. On the one hand, various types of platforms supporting blended learning are emerging with a variety of functions. Especially during the epidemic, some platforms have been continuously optimized in high-density practice feedback to meet all kinds of classroom needs in blended learning from different perspectives. For example, Nail, Learning Pass, Rain Classroom and so on. On the other hand, with the successive development of China's education informatization 1.0 to education informatization 2.0, the infrastructure of informatized campuses and classrooms has been gradually popularized and improved. For example, electronic whiteboards, projectors, projection booths and so on. A good software platform coupled with classroom multimedia has laid a solid foundation for promoting OMO Learning mode.

Information Literacy Preparation for Teachers and Students Based on Blended Learning.
    In the post epidemic era, the vast majority of schools and teachers and students are no longer unfamiliar with the blended learning model; most teachers and students have expressed some experience with online, blended classrooms. Students, in particular, are more enthusiastic and expectant of a learning mode with greater freedom and an informationized classroom environment. OMO Learning mode is another advancement based on blended learning, which is different from and takes into account the blended learning mode. Therefore, it has the basis of good access to the traditional classroom by teachers and students.

The Rapid Construction and Popularization of 5G Network.
    The application of 5G network technology has tended to be normalized, covering all aspects of daily teaching, student activities and student life. It provides an important guarantee for the unfolding of OMO Learning mode, and also creates conditions for the higher-order OMO full-time and space-time integrated teaching mode in the future.
    Therefore the conditions are ripe for the classroom to carry out OMO Learning. In general, OMO Learning mode has been initially applied to the teaching conditions.

5   Conclusion

Utilizing information technology to promote better teaching and learning is a common logical combination of modern educational research and a major direction for future educational development. However, due to the starting point is mostly educators, observation researchers and teachers, ultimately lead to education, no matter how the reform, the direction of the classroom information output and student participation in the form of no fundamental change, as if the students were cut off from the side of a separate. As a result, the real subject of education is still mainly "listening" and "passive". The active participation of students in the classroom is better facilitated by the addition of tools and resources that are tailored to their needs for participation. OMO Learning mode can create a classroom environment that students prefer a more relaxed atmosphere and greater freedom, helping the student body to better integrate into the classroom teaching activities. Information technology, digital learning environment has long been no empty talk and vision. Therefore, schools should make good use of the current digital resource allocation, encourage teachers to boldly try new teaching modes, practical consideration of the students' classroom predicament and needs, to digitally empower students to participate in the classroom, that is, to empower the quality of teaching and learning to improve.

References

1. Cui Zhiyu. Implicit participation in the classroom: discernment- stimulation- transformation[J]. Education Guide, 2019,(04):15-20.
   DOI:10.16215/j.cnki.cn44-1371/g4.2019.04.003.
2. Zhang H. Reflecting on the technocratic tendency of dialogic teaching[J]. Educational Development Research,2011,33(20):64-69.DOI:10.14121/j.cnki.1008-3855.2011.20.010.
3. Wang Yuan,Zhou Zuoyu. An Exploration of the Types and Characteristics of Student Engagement[J]. Global Education Outlook,2018,47(12):38-50.
4. Wylie, C. (2009). Introduction. J. Morton (Ed.), Engaging young people in learning: Why does it matter and what can we do?: Conference proceedings (pp. 1–3) . Wellington, New Zealand: New Zealand Council for Educational Research.
5. HU Yaqing,REN Dongli,LIN Sisi,et al. A case study of smart classroom to enhance learning engagement in classroom teaching[J]. China Education Informatization,2021,(02):30-35.
6. ZHANG Jinbao,MA Jing,JI Lingyan. Promoting University Teaching Quality with Classroom Interactive Software: Learners' Adoption Intention and Application Effect[J]. Modern Distance Education Research,2011(04):83-88.
7. Guthrie, J.T., and D.E. Alvermann, eds. 1999. Engaged reading: Processes, practices, and policy implications. New York: Teachers College Press.
8. John D. Bransford, et al. How People Learn - Brain, Mind, Experience, and School [M]. Shanghai: East China Normal University Press, 2002.2-3.
9. Huang, R.; Tlili, A.; Wang, H.; Shi, Y.; Bonk, C.J.; Yang, J.; Burgos, D. Emergence of the Online-Merge-Offline (OMO) Learning Wave in the Post-COVID-19 Era: A Pilot Study. Sustainability 2021, 13, 3512.

10. Xiao-Jun, Hong-Zheng Sun-Lin, and Hsu-Chen Cheng. "A framework of online-merge-offline (OMO) classroom for open education: A preliminary study." Asian Association of Open Universities Journal 14.2 (2019): 134-146.

11. Wang Yuefen. Online-Offline Integrated Teaching: Connotation, Implementation and Suggestions[J]. Educational Development Research,2021,41(06):19-25. DOI:10.14121/j.cnki.1008-3855.2021.06.005.

12. KONG Qi-Ping. The Conceptual Connotation and Structure of "Student Input"[J]. Foreign Education Materials,2000,(02):72-76.