

# SPOC + PAD: Proposition for an innovative teaching strategy

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*Abstract: With the interest of many teachers and educational researchers towards the dynamics of implementing blended learning in various learning contexts, innovative approaches and strategies have been proposed to promote better learning experience and student engagement. This paper explores the literature and expounds on the possibility of implementing a Small Private Online Course (SPOC) in the Presentation-Assimilation-Discussion (PAD) teaching strategy. Through a literature survey from available research databases, findings on the individual use of SPOC and PAD in different learning environments were presented. The SPOC + PAD seems to be a feasible strategy to guide teachers in maximizing the resources and learning opportunities in the online and offline sessions. Despite this, there are still limited papers written on the implementation of this strategy and its possible impact on the performance and achievement of students. Recommendations for future research are discussed in this paper.*

*Keywords: Small Private Online Course (SPOC); presentation-assimilation-discussion (PAD); teaching strategy*

*Article History: Received: 22 Jan 2024, Accepted: 29 Feb 2024, Published: 24 Mar 2024*

## INTRODUCTION

With the desire to improve the quality of education and promote active student participation in classrooms, teachers have effectively integrated new technologies into their array of strategies. In most cases, the reinvention of these strategies lead to better performance and achievement from among students. The effective integration of technology has enabled teachers to provide immediate and meaningful feedback, on-time guidance on lessons, and customized technical assistance to their students. This paper explores an alternative teaching strategy, which combines the use of technology through a Small Private Online Course (SPOC) and a pedagogical strategy that guides the implementation of a lesson in the classroom. This paper puts forward a discussion that considers the possible utilization of this innovative strategy to provide better learning experience in the classroom.

## LITERATURE REVIEW

The goal of the paper is to capture current knowledge on the SPOC and PAD teaching strategies and provide propositions on the possible merge between the two. This paper takes on the assumption that the integration of SPOC to the established PAD strategy can innovate the learning process and ensure better engagement from among the students. The literature review covers published articles for the last 10 years. These articles are searchable through commonly used databases such as Google Scholar, Scopus, ERIC, and Proquest. The keywords used for the search were “Small Private Online Course”, “SPOC”, “Presentation-Assimilation-Discussion”, and “PAD teaching strategy”.

## SMALL PRIVATE ONLINE COURSE (SPOC)

Small Private Online Course (SPOC) was first proposed and used by Professor Amand Fox of the University of California, Berkeley (Goral, 2013). Small and Private are relative to Massive and Open

in MOOC. Small refers to students generally ranging in size from tens to hundreds, while Private refers to the restrictive admission conditions for students (Kang, 2014).

SPOC supports blended learning and flipped classroom learning, combining online resources and technology with personal engagement between teachers and students. It can be used in a blended learning strategy as it also supports the integration of classroom teaching and online teaching (Kaplan & Haenlein, 2016). SPOC is typically implemented through the following steps: preparation and uploading of teaching syllabus, regular publication of video teaching materials, assignment of homework, and facilitation of online discussions every week. Students are guided by the study checklist to complete the video viewing, homework and participation in discussions according to a published time frame. In the classroom, the teacher conducts classroom lectures, handles online course questions and answers, and administers classroom assessments.

Previous studies have explored the effectiveness of SPOC in various educational environments. Chen and Chen (2019) analyzed the principle of establishing SPOC and constructed a comprehensive teaching strategy that integrates online and classroom learning environments. Their research has demonstrated the positive impact of SPOC on teaching effectiveness and student learning outcomes. Similarly, Yang (2018) studied the application of blended learning based on SPOC, emphasizing the importance of personalized learning strategies and effective implementation processes. These studies provide valuable insights into the potential of SPOC to change higher education teaching practices.

### **PRESENTATION, ASSIMILATION, AND DISCUSSION (PAD)**

PAD is a new classroom teaching strategy proposed by Professor Zhang Xuexin from the Department of Psychology at Fudan University in China (Sun & Asmawi, 2023). It is divided into three stages: lecture (presentation), independent learning (assimilation), and discussion. In the teaching section, the teacher imparts the basic framework and concepts of the chapter content, focusing on the key and difficult points without unnecessary elaboration.

During the independent learning stage, students internalize and explore the topics at their own pace, providing them with opportunities to gain comprehensive understanding of the concepts. In the discussion section, students return to the classroom for in-depth interaction, discussion, and exchange between teachers and students. This allows the students to raise clarifications about the topics and engage with other students to further understand the concepts. One of the salient features of PAD is that it allows the students to gain control over the learning process and develop accountability in what they learn.

Previous studies have provided evidence to support the effectiveness of the PAD teaching strategy in various educational contexts. For example, Ding, Sitthiworacart, and Morris (2022) conducted a study on undergraduate English courses using the PAD strategy and reported significant improvements in students' English proficiency and learning attitudes. Similarly, Sun and Asmawi (2023) studied the impact of the PAD strategy on the writing performance of Chinese undergraduate students in Business English and found that it significantly improved their overall and individual scores in terms of content, language, appropriateness, grammar, and organization. These findings highlight the potential of the PAD strategy in improving student learning outcomes and promoting active classroom participation. Further research can explore the implementation of PAD in different educational environments and its impact on interdisciplinary learning among students.

### **SPOC + PAD**

The integration of SPOC to the PAD strategy (SPOC + PAD) provides an opportunity for the teacher to utilize available technologies to facilitate the different stages of the teaching and learning process. Following the 3-stage process for PAD, SPOC can be implemented to facilitate the provision of learning materials and activities. This allows the students to gain more control of their time as they may be able to access the materials and be updated of the learning activities through the remote system. At the same time, the pedagogical cycle is still guided by PAD, thereby ensuring a structure which is observed by both the students and the teacher.

**Presentation.** The presentation phase of blended learning strategy involves two parts: online and offline. During the online session, students utilize high-quality open online courses to gain a preliminary understanding of chapter content. Meanwhile, in the offline session, the mentor explains the basic framework and concepts of the chapter content in the classroom, emphasizing the key and difficult points. This dual approach ensures that students receive comprehensive guidance while also allowing for personalized interaction with materials (Zhuo, Liu, Zhang, & Wang, 2023).

**Assimilation.** During the assimilation phase, students participate in both online and offline activities to deepen their understanding of the content. Students watch tutorial videos on platforms such

as learning portals, repeatedly review relevant textbooks, and use question banks to provide targeted practice exams for theoretical learning through the online platform. For the offline phase, students consolidate their knowledge through practical exercises in computer laboratories and apply what they have learned to real-world scenarios (Zhuo et al., 2023).

**Discussion.** During the discussion phase, students are encouraged to interact online and offline to promote collaborative learning. During online sessions, students participate in discussions, group meetings, or share their works on learning portals. For the offline sessions, teachers organize group discussions, demonstrations, and other learning activities where students engage in face-to-face interaction and collaborative problem-solving. This method allows teachers and students to actively participate in problem-solving discussions and jointly explore the best solutions (Zhuo et al., 2023).

By SPOC + PAD, the blended learning strategy effectively solves the problem of teacher shortage and maximizes the utilization of online resources in the blended learning environment (Chen & Chen, 2019). In addition, this strategy utilizes various teaching methods, including visual demonstrations, lectures, exercises, task driven learning, discussions, and self-directed learning, to enhance the effectiveness of computer education. This comprehensive strategy not only enhances student engagement, but also promotes deeper learning and critical thinking skills, which is crucial for achieving success in highly competitive academic and professional fields.

### **CONSTRUCTIVISM IN SPOC + PAD**

Constructivism holds that learners actively construct their understanding of the world by incorporating new information into existing cognitive structures (Nola & Gürol, 2006). In the context of SPOC+PAD, constructivism is consistent with the principles of active learning and student-centered teaching methods. Through collaborative problem-solving, peer discussions, and practical activities promoted by PAD, students actively participate in course content and build their understanding through interaction and reflection.

The application of constructivism in SPOC+PAD can bring some potential benefits. By actively involving students in the learning process, this strategy promotes profound understanding and long-term retention of knowledge. Encourage students to connect new information with their previous knowledge and cultivate meaningful learning experiences by actively participating in discussions and activities.

Furthermore, constructivism emphasizes the importance of learner autonomy and self-directed learning (Wang, 2011). SPOC provides students with opportunities for personalized learning experiences, allowing them to explore topics at their own pace and delve deeper into areas of interest. This autonomy enhances students' motivation and self-efficacy, thereby increasing their participation and autonomy in learning (Huang et al., 2020).

Additionally, constructivism emphasizes the social dimension of learning (Vygotsky, 1978). SPOC+PAD encourages collaboration and peer interaction, creating a supportive learning community where students can exchange ideas, receive feedback, and collaborate to build knowledge. The social aspect of learning can cultivate a sense of belonging and promote the development of interpersonal skills (Ouyang, 2019).

By integrating constructivist principles into the implementation of SPOC+PAD, educators can create a dynamic learning environment that promotes active engagement, autonomy, and collaboration among students. This approach aligns with contemporary educational theories and offers promising avenues for enhancing student learning outcomes and experiences.

### **FUTURE RESEARCH PERSPECTIVES ON THE IMPLEMENTATION OF SPOC + PAD**

Previous studies focus on exploring SPOC and PAD as isolated ideas. As such, the integration of technology for the implementation of PAD is not clearly established. The lack of documented teaching design following the integration of SPOC and PAD can provide an alternative perspective in employing the PAD strategy.

Several studies showed favorable results in implementing blended learning (Jiang, et al., 2023). However, despite the claims from available literature, very few investigated on how acceptable this strategy was for learners. Thus, users' perception and ratings of websites, applications, and information systems are determined by their first impression before use and experience, including content, usability, and aesthetics (Gafni et al., 2018). With these gaps, understanding the user acceptability of these platforms may provide additional inputs in the improvement of similar programs and in the creation of new similar applications which may help assess the acceptability of the SPOC + PAD teaching strategy. The rise of other available platforms and learning management systems must also be considered in further enhancing learning experience and student engagement. Currently, teachers and students have been exploring various technological tools such as Mentimeter, Quizlet, Schoology, and Poll Everywhere to

enliven classroom sessions, whether in an online, offline, or blended environment. This prompts more studies to focus on the impact of integrating these technologies into the overall learning experience (Siemens & Baker, 2012). It must be emphasized that the SPOC + PAD strategy is a flexible strategy that may be implemented using a variety of available tools, thereby opening opportunities for the integration of new technologies such as generative artificial intelligence. Thus, researchers are cautioned in establishing the context covered by their studies to ensure that the unique features of these applications and programs are well considered in the discussion of findings.

Future research can further explore how to develop professional development programs to help teachers better implement the SPOC+PAD teaching strategy. These professional development plans can include training courses, resource sharing platforms, teaching guidance, and feedback mechanisms. Through training and support for teachers, their ability and confidence in using SPOC+PAD teaching strategy can be improved, further improving student learning outcomes (Wuhue, 2023). In addition, the effects of the SPOC+PAD teaching strategy in different subject areas and different teaching environments can also be studied to obtain a more comprehensive understanding and practical experience (Zhang, Shao, & Chen, 2023).

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