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## Cultivating a Culture of Safety in the Workplace: Developing Small Private Online Course (SPOC) for Administrative Workers in Higher Education Institutions

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### ABSTRACT

Safety awareness is a critical aspect for administrative officers in higher education institutions because they are responsible for ensuring a secure and efficient working environment for staff and students. However, safety awareness among administrative staff is often overlooked, leading to gaps in preparedness for emergencies and daily operational risks. This study developed an effective safety training model using Small Private Online Courses (SPOCs) to enhance safety awareness among administrative staff. The research employed the ADDIE model (i.e. Analysis, Design, Development, Implementation, and Evaluation) to systematically analyze needs, design relevant content, and assess outcomes. The findings revealed that SPOCs are effective in improving participants' understanding and application of safety protocols because they provide flexible, targeted, and interactive learning experiences. This study highlights the importance of integrating modern, adaptable training methods to foster a safer and healthier workplace, emphasizing the long-term impact of continuous safety education on institutional well-being.

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## 1. INTRODUCTION

Safety awareness remains a critical issue in higher education institutions, where administrative officers play a vital role in maintaining a secure, efficient, and productive environment. Despite their importance, many administrative officers lack adequate safety training, which can lead to workplace hazards, decreased productivity, and compromised institutional reputation. These officers are responsible for managing safety protocols, coordinating emergency responses, and ensuring compliance with health and safety regulations, yet limited access to continuous and practical training makes it difficult for them to address dynamic safety challenges effectively. Moreover, safety in the workplace is directly linked to productivity because well-trained staff can prevent accidents that disrupt operations and compromise the well-being of both staff and students (Sharif & Sharif, 2016, de Bienassis *et al.*, 2021). Workplace harassment and safety concerns have also been shown to reduce workforce productivity, highlighting the urgency of proactive safety measures. In the context of higher education, fostering a safe and respectful environment is crucial not only for the well-being of staff and students but also for the institution's operational efficiency (Everett, 2017). Administration officers, by ensuring that safety measures are in place and adhered to, help maintain a smooth and uninterrupted educational process.

Current approaches to safety training in higher education often rely on traditional face-to-face methods that are not flexible enough to meet the evolving needs of administrative staff. Although character education and safety practices are well-recognized (Baydin, 2014), there remains a lack of innovative and practical learning solutions tailored to administrative roles. Many programs fail to integrate safety training into daily administrative tasks or address specific issues such as ergonomic risks, mental health, emergency preparedness, and workplace violence prevention. Consequently, there is a pressing need for modern, interactive, and context-specific training that addresses these gaps and fosters a sustainable culture of safety.

To address these challenges, this study introduces the Small Private Online Course (SPOC) as an innovative platform to enhance safety awareness among administrative staff (Zheng *et al.*, 2018). SPOCs offer personalized, flexible, and interactive learning experiences that allow staff to engage with essential safety materials at their convenience. Unlike conventional training, SPOCs can incorporate multimedia, simulations, and assessments, thus ensuring better retention and application of safety protocols. This method is especially relevant because administrative officers manage demanding schedules, and accessible training solutions are essential for effective learning without disrupting daily responsibilities. The SPOC approach is also aligned with broader trends in Learning and Development (L&D) strategies, which emphasize flexibility and user-centered design.

Using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation), this research systematically developed and implemented a SPOC focused on workplace safety. The method allowed a thorough analysis of staff needs and the creation of targeted training content. A practical case at the State University of Malang showed significant improvements in safety awareness and a reduction in workplace incidents because SPOCs provided ongoing, flexible, and practical learning opportunities.

The novelty of this research lies in integrating the SPOC framework within administrative safety training to promote a sustainable safety culture in higher education. By moving beyond traditional classroom models and offering flexible digital learning, this study shows how safety training can be both effective and adaptable to administrative staff's unique needs. The impact of this approach is significant because it fosters not only safer workplaces but also

enhances institutional productivity and staff well-being. Furthermore, this research contributes to the broader discourse on innovative workplace safety training, offering practical, scalable solutions for higher education institutions committed to improving staff preparedness and resilience in managing safety challenges.

## 2. METHODS

The development of a SPOC on safety awareness for administrative staff at the State University of Malang followed a systematic and structured approach based on the ADDIE model (i.e. Analysis, Design, Development, Implementation, and Evaluation). The use of prototyping models provided a robust framework for iteratively designing, testing, and refining the course content and structure (Koc, 2020). This methodological framework ensured that the SPOC was tailored to meet the specific needs of administrative staff, aiming to foster a safer and more informed workplace.

The Analysis phase involved conducting a thorough needs assessment to identify the specific safety challenges faced by administrative staff. This stage examined current gaps in knowledge and practices related to workplace safety, ergonomic risks, emergency procedures, and mental health awareness. Data were collected through preliminary surveys and interviews with staff members, allowing the research team to identify key learning outcomes and objectives that the course needed to address.

In the Design phase, the team developed a detailed blueprint for the course structure, including defining learning objectives, selecting instructional strategies, and outlining the course flow. The topics were carefully curated to address identified safety concerns, ensuring relevance to administrative roles. The course outline included modules covering fundamental safety principles, ergonomic practices, mental health and stress management, fire and emergency preparedness, and workplace harassment prevention. Furthermore, the course design was aligned with the Learning Management System (LMS) used by the university, ensuring seamless integration and user accessibility.

The Development phase focused on creating course materials and interactive components that would engage learners effectively. This included the production of multimedia learning objects such as videos, quizzes, simulations, and discussion forums. The design of learning activities followed the standards set by the LMS, ensuring that each module offered a combination of theoretical and practical content. The course content emphasized real-life case studies and scenarios to ensure that administrative staff could apply the knowledge directly to their work settings. The design flow of the SPOC platform includes navigation from modules to assessments and certificates.

The Implementation phase involved uploading and integrating all developed content into the LMS. The SPOC was piloted among a selected group of administrative staff to identify potential technical issues and gauge user experience. Feedback from these initial users was collected to refine course navigation, adjust content clarity, and ensure interactive elements functioned as intended. Throughout this phase, various materials such as lectures, readings, quizzes, and assignments were organized to facilitate easy access and logical progression for learners.

Finally, the Evaluation phase was conducted to assess the effectiveness of the SPOC in improving safety awareness among administrative staff. Data were gathered through post-course surveys, reflective discussions, and assessment results to measure knowledge acquisition, application of safety practices, and participant satisfaction. This iterative feedback loop allowed the research team to enhance the SPOC continuously, addressing weaknesses and reinforcing strengths identified during course delivery.

By following this comprehensive method, the study ensured that the web-based SPOC on safety awareness was practical, engaging, and relevant to the daily responsibilities of administrative staff, thereby contributing to a safer university environment. The structured learning model offers an innovative approach to professional development and workplace safety training within higher education institutions.

### **3. RESULTS AND DISCUSSION**

#### **3.1. Results**

##### **3.1.1. Curriculum and learning delivery**

The course curriculum developed for the SPOC on safety awareness for administrative staff at the State University of Malang represented the culmination of both the Design and Development phases within the ADDIE model. The process of curriculum design began with a detailed needs assessment and the identification of specific learning objectives tailored to administrative roles. These objectives were translated into a structured course outline, which included topics such as workplace ergonomics, emergency preparedness, mental health awareness, and harassment prevention. This structured approach was essential because it ensured that the content addressed the unique challenges faced by administrative staff in higher education settings.

During the Development phase, the instructional materials were created, with explainer videos serving as the primary mode of delivery. These videos were designed to convey complex safety concepts in an engaging and accessible manner because the visual and auditory elements help maintain learner attention and facilitate understanding. To enhance the effectiveness of these videos, key features such as clear explanations, high-quality visuals, engaging narratives, and interactive elements (e.g., quizzes and prompts) were incorporated. These elements aimed to keep learners motivated and involved throughout the course, aligning with best practices for online learning (Ribosa & Duran, 2023).

In addition to videos, the SPOC included interactive learning activities and quizzes to promote active engagement and practical application. The course content was organized logically to support step-by-step learning progression, with modules accessible via the Learning Management System (LMS). The course flow design ensured that learners could navigate seamlessly through the materials, assessments, and interactive tasks. This organization was critical because it provided a cohesive and learner-friendly educational experience.

##### **3.1.2. Expert review**

Recognizing the importance of quality assurance in online learning, an expert review was conducted to evaluate the content, structure, and delivery of the SPOC. This review served as a vital validation tool to ensure the educational value and alignment of the course with the learning objectives (Al-Aghbari *et al.*, 2021). The expert review was necessary because it provided objective feedback to refine the course and improve its effectiveness in real educational settings.

The review process began with a comprehensive analysis of the course materials by subject matter experts. These experts examined various aspects of the course, including curriculum content, instructional techniques, multimedia components, and assessment strategies. Their evaluation aimed to identify both the strengths and the areas requiring improvement. Following their analysis, recommendations were made for enhancing instructional strategies and revising specific content areas to improve clarity, logical flow, and practical applicability.

To ensure a structured evaluation, experts used a standardized questionnaire, rating each course aspect on a scale from 1 (lowest) to 4 (highest). This quantitative approach allowed for a detailed and systematic assessment of each component. The summarized results of this evaluation are presented in **Table 1**, which reflects the overall effectiveness and specific areas that need attention. According to the results, the curriculum demonstrated strong alignment with learning objectives (score of 4) and flexibility (score of 4), indicating its relevance to administrative roles. However, logical progression (score of 2) was identified as an area needing improvement because some modules lacked a clear sequence, affecting the flow of learning. The content was relevant and accurate (score of 3) and contained sufficient depth (score of 3), though experts noted that practical application (score of 2) could be strengthened with more real-life scenarios. The learning delivery was also well-rated, with high engagement and interactivity (score of 4) and good accessibility (score of 4). Meanwhile, production quality (score of 3) and clarity (score of 3) were noted as satisfactory but could benefit from slight enhancements. Overall, the expert review confirmed that the SPOC offered a strong and flexible learning platform, though improving logical flow and adding more practical case studies would greatly enhance its value. The findings highlight that a structured, engaging, and interactive online learning course can effectively address workplace safety needs when continuously refined based on expert feedback.

### 3.2. Discussion

#### 3.2.1. Curriculum and course outline

The SPOC on Safety Awareness for Administrative Workers at the State University of Malang was designed as a comprehensive and structured learning program to address the multifaceted safety needs of administrative staff. This curriculum was systematically developed through the Design and Development phases of the ADDIE model, ensuring that each component aligned with the identified learning objectives and specific challenges faced by administrative staff, as shown in **Table 1**. The course content spans a broad spectrum of topics that collectively contribute to fostering a safe and healthy working environment, because administrative roles often encompass a wide range of safety concerns that must be addressed holistically.

The curriculum begins with Occupational Safety and Health (OSH) Fundamentals, introducing foundational concepts, relevant regulations, standards, and the significance of promoting an OSH culture. This ensures that administrative staff gain a solid understanding of workplace safety principles. The module on Hazard and Risk Management follows logically by training participants to identify and assess workplace hazards and apply risk control measures effectively. Because workplace stress and mental health are increasingly recognized as essential aspects of employee well-being, a dedicated module on Stress and Mental Well-being is included to equip staff with strategies for managing stress and maintaining mental balance.

Addressing Ergonomics and Work Posture is critical because many administrative tasks involve prolonged sitting and repetitive movements, which may lead to musculoskeletal disorders if not managed properly. This module provides practical guidance on optimizing work posture and setting up ergonomic workstations. In addition, Physical Health and Exercise, and Balanced Nutrition modules emphasize the importance of maintaining overall well-being because a healthy body enhances workplace productivity and reduces health-related absences.

The curriculum also gives significant attention to Mental Health, covering both awareness and preventive strategies for common mental health challenges, supporting a comprehensive approach to employee well-being. For those working in potentially hazardous environments, the Laboratory Safety module addresses specific risks, offering guidelines for safe practices and emergency responses. Lastly, Emergency Handling prepares staff to respond promptly and effectively to crises, covering first aid, evacuation, and post-incident recovery procedures.

Collectively, this curriculum provides administrative staff with essential competencies to promote a safe, healthy, and productive work environment. Its comprehensive nature, reflected in **Table 1**, underscores the effort to address both physical and psychological safety in a balanced and practical manner. Through this structure, the SPOC not only improves safety awareness but also cultivates a proactive safety culture within the university. By integrating theoretical knowledge with practical strategies and case-based discussions, this curriculum can significantly impact the safety culture and well-being of the entire university community.

### 3.2.2 Learning delivery

The integration of explainer videos and multimedia content into the SPOC at the State University of Malang greatly enhances the learning experience because it addresses different learning styles and improves knowledge retention (Santos *et al.*, 2025). Videos, as a core component of the SPOC, are crafted to engage learners effectively, using storytelling, high-quality visuals, and interactive elements such as quizzes and reflection prompts. These features are essential because they not only present information but also actively involve learners in the learning process. Through visual narratives and interactive simulations, learners can better grasp complex concepts, such as emergency procedures or ergonomic practices.

Moreover, the flexibility and accessibility of teaching videos allow learners to revisit content as needed, ensuring that they can learn at their own pace without the constraints of a fixed classroom schedule. This is particularly important for administrative staff who may have varying workloads and responsibilities. The reusable nature of video content also offers a cost-effective training solution because it minimizes the need for repeated live sessions while ensuring consistent quality.

In addition to videos, text-based content is strategically integrated into the course to complement and reinforce the video lessons (Pollock *et al.*, 2023). Text-based modules provide more detailed explanations and serve as reference materials for learners to consult after watching the videos. This dual-modality approach caters to diverse learner preferences because some individuals may prefer reading, while others may learn better through visual or auditory means. The combination of video and text also allows for the inclusion of comprehensive case studies, step-by-step guides, and additional resources that may not be fully covered within the time constraints of video presentations.

By blending multimedia and textual content, the SPOC creates an interactive and reflective learning environment that supports deeper understanding and skill acquisition. This method ensures that the safety training provided to administrative staff is not only informative but also engaging and practical, thereby fostering a meaningful application of safety practices in their daily work. Furthermore, the inclusion of quizzes, interactive discussions, and case simulations within the Learning Management System encourages active participation, reflection, and critical thinking about safety issues relevant to the university context.

In conclusion, the curriculum and delivery method of this SPOC demonstrate a well-rounded approach to enhancing safety awareness among administrative workers. The



combination of comprehensive curriculum design, engaging video-based instruction, and complementary text-based materials ensures that the learning experience is effective, accessible, and impactful. These efforts collectively contribute to the development of a safer, healthier, and more productive work environment at the State University of Malang, supporting both individual well-being and institutional success.

### 3.2.3. Expert review

When developing a SPOC on safety awareness for administrative workers at the State University of Malang, providing clear and detailed interpretation of expert feedback is essential because it ensures that complex data regarding course effectiveness, learner engagement, and educational outcomes are translated into actionable insights (Al-Aghbari *et al.*, 2021). By transforming intricate evaluations into accessible recommendations, this process allows for well-informed decisions to enhance course quality. Such rigorous evaluation is vital to ensure that the course remains relevant, engaging, and effective in fostering a safer work environment for administrative staff.

As shown in **Table 1**, expert reviews applied a 4-scale effectiveness measure, and verbal interpretations were given based on weighted means. A weighted mean of 1.0 to 1.49 is categorized as *Very Ineffective*, signaling severe shortcomings and failure to meet educational goals. A range of 1.5 to 2.49 is labeled *Ineffective*, indicating significant deficiencies despite some efforts. Scores between 2.5 and 3.49 are considered *Effective*, reflecting satisfactory performance, while 3.5 to 4.0 are *Very Effective*, demonstrating outstanding success in meeting and exceeding learning objectives (Koc, 2020).

Based on the expert review, the curriculum received a mixed evaluation. It was rated highly effective in aligning with learning objectives (4) and flexible (4), ensuring that lessons directly contribute to expected outcomes and accommodate diverse learning styles. However, its logical progression (2) was notably weak, indicating that while the content is relevant, its sequence may confuse learners because new information is not always well-connected to previous knowledge. Addressing this issue of coherence would greatly improve the learners' ability to follow and retain the material.

The content was rated as generally relevant (3) and accurate (3), indicating that the information is up-to-date and appropriate for the target audience. However, its depth (3) was only moderately effective, and practical application (2) was limited. This suggests that while learners receive essential theoretical knowledge, there are insufficient real-life scenarios or examples to facilitate application. Because practical relevance is key to effective safety training, enriching the content with case studies and applied exercises would substantially enhance its value.

Regarding learning delivery, the course was evaluated as effective overall, with high scores in engagement and interactivity (4) and strong accessibility and inclusivity (4), indicating that students are actively involved and that the course accommodates diverse needs (Santos *et al.*, 2025). Production quality (3) was deemed satisfactory, though improvements in visual and audio clarity could elevate the learning experience. Clarity and readability (3) also require further refinement to ensure that materials are easily understood by all participants, thereby increasing knowledge retention (Pollock *et al.*, 2023).

Overall, this expert review highlights that while the SPOC demonstrates strengths in curriculum alignment, flexibility, and learner engagement, there are critical areas for enhancement. Specifically, improving the logical flow of the curriculum, deepening content coverage, and increasing practical applications are necessary to optimize its impact. By addressing these aspects, the course can provide a more cohesive, comprehensive, and

practical learning experience that effectively supports safety awareness among administrative workers at the State University of Malang.

#### 4. CONCLUSION

Promoting safety awareness among administrative officers at the State University of Malang requires consistent training and education on current safety protocols and emergency procedures because administrative staff play a crucial role in ensuring a secure and healthy campus environment. Workplace safety for administrative personnel encompasses a wide range of issues, including ergonomic considerations, mental health, emergency preparedness, and workplace violence prevention. Ensuring that administrative staff are well-informed in these areas is not only a matter of compliance but also essential for fostering a productive and healthy work atmosphere. Therefore, investing in comprehensive safety training and resources is a strategic initiative that reflects the university's commitment to creating a safe, inclusive, and efficient workplace. This proactive approach contributes not only to safeguarding staff and students but also to enhancing institutional effectiveness and reputation.

The development of the SPOC on safety awareness was carefully structured using the ADDIE model, which served as a systematic framework for ensuring a high-quality and learner-centered educational experience. This model provided a step-by-step approach that included analysis of learner needs, detailed course design, thoughtful content development, effective implementation, and continuous evaluation. Because of this structured process, the SPOC was tailored to address the specific needs of administrative staff while aligning with the broader educational and safety goals of the university. Moreover, the ADDIE model allowed for iterative refinements, ensuring that the course remains effective and engaging over time.

The curriculum of the SPOC offers a comprehensive exploration of OSH, covering critical topics such as OSH regulations, hazard identification and control, stress management, ergonomics, physical and mental well-being, laboratory safety, and emergency response procedures. Participants are introduced to the principles of OSH management systems and encouraged to foster a culture of safety within the workplace. Additionally, the course emphasizes the importance of continuous evaluation of OSH practices, enabling participants to maintain high safety standards. By including modules on mental health, work-life balance, physical exercise, and nutrition, the course adopts a holistic approach to workplace safety and well-being, ensuring that participants not only understand safety protocols but also learn how to maintain their own physical and psychological health.

The instructional approach in this course relies heavily on explainer videos, designed to present complex concepts in an engaging and visually appealing format. These videos, supported by interactive elements and clear explanations, aim to enhance learners' understanding and retention of critical safety concepts. By integrating multimedia and interactive activities, the course provides an engaging learning experience that supports the development of practical knowledge and skills applicable to the workplace.

Based on the expert review, it is evident that the course demonstrates significant strengths, particularly in aligning with learning objectives and offering flexibility to accommodate various learning styles. However, areas for improvement remain. Notably, the logical progression of the curriculum needs refinement to ensure coherence and better learning flow. While the content is relevant and accurate, its depth and practical application could be enhanced to provide more robust learning outcomes and facilitate real-world application. Additionally, although learning delivery is effective—especially in engagement



and inclusivity—there is room to improve production quality and content clarity to further optimize learning.

Addressing these identified weaknesses—particularly in logical sequence, content depth, and practical relevance—will be crucial for enhancing the SPOC's overall impact. By refining these areas, the course can evolve into a more cohesive, comprehensive, and impactful learning tool that better serves the safety and well-being of administrative workers at the State University of Malang. Ultimately, this SPOC has the potential to significantly contribute to cultivating a stronger culture of safety within the university, while promoting the broader goal of health and well-being in the workplace.

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## 6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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