

# Teacher's Creative with Technologies Impacted to Improve Learning Ability of Fashion Students' English Language in Higher Education

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## Abstract

English is a second language in Indonesia, so an English teacher needs to be more creative in understanding the character of his students to achieve learning objectives. This study explores teachers' creativity with technologies that improve fashion students' English language learning ability in higher education. A qualitative approach and a case study method were used to gain deep information about the research purpose. Thirty-one students and five teachers were involved in describing and explaining teacher's creativity with technologies used to improve the learning ability of the English language from their viewpoints. The data were collected using open-ended interviews and observation. This study found that teachers' creativity with technologies in their teaching strategy benefited students. Teachers combined it through games, providing students with a pleasant and welcoming atmosphere in the classroom. Besides, students were given such unique assignments as creating vlogs related to the topic in the class or recording promotional videos about advertising, especially about fashion. Eventually, it can be concluded that teachers' creativity with technologies in the English language subject in the Fashion Department could improve students' learning ability.

## Keywords

*English language; fashion student; learning ability; teacher's creativity; teaching strategy; learning outcome.*

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## 1. Introduction

An evaluation from other teachers in the same or other fields is needed to increase teachers' abilities (Fu & Qi, 2022; Keiler, 2018; Van Dijk et al., 2020). It could

improve students' learning quality through the teachers' strategy to manage and deliver knowledge and engage students during learning activities (Kim et al., 2019; Parker et al., 2022). It can help improve the quality of learning activities and increase students' achievement (Boström & Palm, 2023; de Vries et al., 2022; Double et al., 2020).

English is one of Indonesia's most-spoken foreign languages, and most Indonesian students already learned it at previous educational levels. They consider English lessons boring or frightening because of their lack of basic command of the English language.

One way to overcome the problem of boredom in learning is to include technology in learning activities. Technology plays a role in making learning fun and more meaningful for millennial students. Therefore, the aim is to explore teachers' creativity with technologies used to improve fashion students' English language in higher education with three aspects: teaching strategies, learning processes, and learning outcomes. Through a qualitative approach, the findings of this study can provide a real data explanation in the field. They will impact students' skills in the English language (Wale & Bishaw, 2020) to support their future careers.

## **2. Literature Review**

The quality of learning impact is caused by the effectiveness of classroom interaction between teachers and students (Hofkens et al., 2023). One of them is shown by a teacher's strategy in transferring material to students during the learning process (Kim et al., 2019; Parker et al., 2022). Learning quality can be improved by using technology in the learning process (Haleem et al., 2022a; Nkomo et al., 2021). Learning for millennials requires a combination of technology, so conventional learning is not right for now (Chan & Lee, 2023). Serdyukov (2017) explained that a process of teacher innovation in transforming the learning process in the classroom will impact the quality of learning outcomes and outputs. A little innovation teachers make will increase the capacity, effectiveness, and productivity of teaching and learning (Hoffman & Spangehl, 2011). To be able to innovate, a teacher needs to be creative (Fischer, 2020). Innovative behavior is a process in which teachers generate, create, develop, apply, promote, realize, and modify new ideas that impact students' performance (Thurlings et al., 2015). This can be done by teachers who have professional abilities, teachers who understand the character of students, teachers who understand the atmosphere of the classroom, and teachers who understand the

technology they use. Based on this explanation, this study focuses on teaching strategies, teaching processes, and learning outcomes in the English Language subject in fashion classes at higher education.

### **3. Methods**

#### **3.1 Research design**

To gain highly detailed data and deep information, this study used a case study method with a qualitative approach through observation and open-ended interviews. This approach enables participants to explain the topic in detail in their own words.

#### **3.2 Participants**

Five teachers were involved in this study. They are from the field of education, have teaching experience in higher education, and understand technologies in the classroom. Meanwhile, this study gained information about teachers' creativity with technologies that improve fashion students' English language learning in higher education. They explained it in their own words based on their experiences. In this study, researchers used pseudonyms for all participants.

#### **3.3 Interview guideline**

Using open-ended interviews, researchers developed interview guidelines to achieve the research purpose. The researchers used questions, including how, why, and what questions, to reveal teachers' creativity with technologies used to improve learning ability in English language classes of the Fashion Department. Participants were asked to talk about teaching strategies used by teachers, learning processes in the class, and learning outputs. The same questions were addressed to all participants in the study.

The example of questions used in this study included: (1) questions related to teaching strategies, consisting of "Could you explain teacher activities, especially in English language classes in Fashion Department?", "What kinds of learning strategies are used in that class?" "Why did the teacher use it?" and "How was the reaction of students about the strategies?" Another example of questions might be (2) interview questions about learning processes in the class, including "Could you explain the class situation? Why was the situation like that?", "How did the teacher open the class?" "How was the main learning process?" "Did the teacher

give a topic suitable to learning plans?" "How was students' reaction to the topic?" and "Why did students have such a reaction?". The last examples of questions were related to (3) learning outputs, such as: "Can you explain the assignment undertaken by a student?", "Why must a student do that assignment?" "What was the benefit of the assignment for the student? and Why?" All questions used probing questions to obtain detailed information from participants.

### **3.4 Data collection**

Open-ended interviews and observation were used in this study to collect data. The interview was conducted at the end of the teaching activity. Before holding the interview, the researchers notified each participant that they had to explain their personal opinions related to teachers' creativity with technologies used to improve learning ability in English language classes of the Fashion Department. The interviewer created such a relaxed, friendly atmosphere that the participants did not feel like strangers during this interview. In addition, the interview began with an easy and friendly question, which helped maintain such an atmosphere. The interview took 30 minutes for each participant.

- Furthermore, the step-by-step procedures of data collection for this study were as follows:
- Data were collected from interviews and observations related to teachers' creativity with technologies used to improve learning ability in English language classes of the Fashion Department, including teaching strategies, learning processes, and learning outputs.
- The researchers noted and documented all of the commentaries from all participants. Then, they interpreted them according to the documentation of interviews and observations.
- To compile data in this study, the researchers used codes for analysis. There are two kinds of codes: a code for teachers who joined in the evaluation of the teaching process and a code for students involved in the learning process that used the teacher's creativity and technologies (to improve teachers' ability). The codes were teach\_1 to teach\_5 for teachers and student\_1 to student\_31 for students.

### **3.5 Data analysis**

In this study, the researchers used a Milles and Huberman model with three steps: data reduction, data display, and conclusion drawing. The triangulation was used to assess the data's validity and ensure the original results' reliability. They

presented the original data directly from the notes and documents of interviews and observations.

Subsequently, the researchers made a reasonable interpretation and carried obvious implications by systematically comparing collected data with previous research to ensure internal statistical reliability. For instance, they analyzed and interpreted transcripts of the interview about informants' experiences and perceptions about the teacher's creativity with technologies used to improve learning ability in English language classes of the Fashion Department. They created a collaborative effort to compare, discuss, and identify themes of research findings to validate data interpretations. They avoided making a subjective interpretation by referring to sources and factual backgrounds when and where they were documented to provide an accurate reflection.

#### **4. Results**

The interpretation of data from interviews and observations consisted of three parts because, from the original documents of interviews and observations, most of the participants continuously discussed teacher's creativity with technologies used to improve learning ability in English language classes of the Fashion Department on three aspects: teaching strategies, learning processes, and learning outputs.

##### **4.1 Teaching strategies**

Students attending classes and joining in learning processes form one of the most important parts of overall learning processes. As mediators in the class, teachers must have a strategy to deliver knowledge to their students. Hence, teaching strategies constitute another important thing in the process. For this reason, a teacher must be creative to create favorable, ideal conditions for learning activities in classes. Researchers noted that creative teachers are one of the keys to success in the learning process as one of the effective ways to improve teaching processes (teach\_1, teach\_2, teach\_3, teach\_4, and teach\_5). Meanwhile, the results of interviews with the students involved in the learning process before and after the implementation of teacher's creativity and technologies showed that the English subject became more attractive than before because teachers involved games in learning activities, helping students enrich vocabularies and practices English conversation in the fashion field. Based on observation, lecturers also use design strategies in classroom learning, such as using games, WhatsApp, and video as the

chosen technology in teaching and learning. Finally, teaching strategies in the class will impact students' learning process and achievements.

## **4.2 Learning processes**

Based on interviews with teachers, teachers who taught in English language classes used the two most common methods: giving a class presentation and assigning students homework, from which students got nothing but a negative impression about the subject. A teacher's creativity provides something different, especially in the learning process (teach\_1, teach\_2, teach\_3, teach\_4, and teach\_5). Observation also showed that students were very happy to do activities during teaching and learning in the classroom. All students were active and focused in the activities designed by lecturers in the classroom. Eventually, the implementation of teacher's creativity allowed teachers to adopt new varieties of methods, so much so that they could make learning processes more dynamic.

## **4.3 Learning outputs**

Learning output is a critical evaluation to know the achievement from the learning activities. The learning purpose of this class through the English profession is that students can master the concepts and principles of management and entrepreneurship to manage businesses in the fashion field in creative, innovative, and competitive ways based on the entrepreneurship spirit. To serve this purpose, teachers gave assignments related to English communication. Such assignments as creating video blogs with different topics, uploading them in the group, and making advertisements related to fashion products were aimed at helping students increase their English skills. The purpose of the assignment is that they get used to communicating in English, and in the future, they can promote their masterpiece in the International market (teach\_1, teach\_2, teach\_3, teach\_4, and teach\_5). Observation results also showed that all student finished their assignments on time. Their assignment was also discussed in the classroom using English Language by each student. They feel very happy to do it. In summary, students' assignments are related to their daily activities, so they get interested in doing them. Therefore, these will have a positive influence on their English language skills.

## **5. Discussion**

Most students consider the English language a difficult subject they are afraid of. The study found that teacher's creativity positively affected teaching strategies, learning processes, and learning outcomes (Shingphachanh, 2019; Takahashi & McDougal, 2016). During this study, teachers undertook collaborative efforts with fellow teachers at the same level, even from other departments, to complete the overall processes, from drawing up plans to carrying out evaluations. The implementation shared helpful insights with model teachers in yielding excellent student learning results.

### **5.1 Teaching strategies**

The teacher is key in making the teaching and learning process successful in the classroom. Creative teachers are one of the keys to success in the learning process. Teachers must deliver new knowledge and skills and become models of attitude in class, not outside it. To engage students in the learning process, teachers must have strategies made and planned before teaching in the class. In English language classes, especially in the Fashion Department, before implementing teachers' creativity and technologies, giving a class presentation and assignments was the common method teachers usually applied and developed. Unfortunately, this made English so difficult that students were afraid, destroying their confidence to practice English in everyday communication.

Therefore, teacher's creativity is one of the efforts to enhance students' achievements by improving the quality of teachers' learning activities (Shingphachanh, 2019). The objective is to polish students' English language skills and bring about a shift in students' paradigm of English lessons (Goh & Fang, 2017). Only after they conducted teachers' creativity and technologies and got feedback from other teachers did they use unique teaching strategies combining two or three different teaching methods. As a result, students did not get bored, enjoyed the class, and managed to communicate in English directly during the learning process. In the first learning hours, teachers delivered knowledge by giving a class presentation on verb tenses for daily communication, especially in the fashion field. Then, they had students make simple sentences applying the grammatical rules in five minutes.

At the end of the learning process, teachers held an interactive quiz aimed at helping students to remember English language vocabulary. At the beginning of

the game, teachers divided the class into two groups and explained the rules of this game. Sometimes, instead of such quizzes, they played a special game in which students were supposed to apply the foregoing lesson, verb tenses. This game was a Guessing Game. In this game, some students made some movements, and others had to give guesses according to which they made a sentence containing the application of verb tenses. Teaching strategies in the class will impact students' learning process and achievements.

Meanwhile, students had different understanding levels before and after implementing the teacher's creativity and technologies in the classroom. Three-quarters of the students stated that the subject of the English language became more attractive than before because teachers involved games in learning activities, helping students enrich their vocabularies and practice English conversation in the fashion field. On the other hand, one-third of the students stated that teachers' strategies made them afraid because they never communicated in English before. Some students were shocked when teachers asked questions or talked to them in English. Sometimes, a teacher assigned them the task of creating vlogs (video blogs or video logs) related to the class topic. For example, if today's topic is about the simple past tense, the assignment of the topic can be about an unforgettable moment. The student must record themselves when they talk about it. At first, students disliked the assignment, but it made them more confident to communicate in English in their daily conversations.

Given the explanation above, teacher's creativity and technologies can help teachers improve their teaching quality and get new ideas about good strategies to use in the class (Simón et al., 2018). Moreover, teacher's creativity and technologies could help them learn the class characteristic.

Creativity inspires teachers to improve the learning quality in class by suggesting alternative, effective strategies to adopt in their classes (Gustina & Sweet, 2014; Machali et al., 2021; Xie & Jiang, 2022)). Teachers must carefully watch their students' character to choose successful strategies (Ball & Forzani, 2009; Felder & Brent, 2005). The teaching strategies may be class presentations, question-and-answer sessions, quizzes, games, and creating vlogs. Teachers' class presentation is necessary for the lesson's basic concepts before engaging all students in a game (Haleem et al., 2022b; Licorish et al., 2018). Question-and-answer sessions can be the second strategy to ensure students completely understand those concepts. In this session, they can address quiz questions to all students. In addition, they can



assign students to create videos every week and upload them on their social media to encourage their confidence in their skills in practicing the English language.

## **5.2 Learning processes**

Teachers become readier to teach in the class because they are already prepared to plan the learning process. They always write what to do and put it into action in class. This means that drawing up plans is another key to success in the learning process in English language classes of the Fashion Department.

Learning processes in English language classes became more attractive, for teachers implemented two or more teaching strategies to make the atmosphere and learning situation more dynamic. Playing games was one of the right strategies to implement in those classes. Nevertheless, not all students liked it in the first place. They felt no confidence in their own English skill. But the second time teachers played games in the class, students could enjoy the class, and they wanted more games. In addition, the chairs in the class unexpectedly supported the learning process. Teachers and students set up them in U-shaped lines. It becomes easier for teachers to teach and deliver knowledge because students sit face-to-face with teachers without a barrier. Similarly, students can address questions or communicate directly with teachers. Therefore, during half of the semester, teachers used this way to teach in the class.

Besides, the implementation gives a vast variety of teachers' learning activities and makes them more dynamic (Ali et al., 2017; Al-Rahmi et al., 2018; Sarwar et al., 2019). For example, creativity gives them a brilliant insight into how they can arrange classroom seating. They can have students sit in a U-shaped line. This makes it easier for them to communicate directly with each other and closely watch their students' character. The formation also enables teachers to motivate those students lacking confidence and encourage them to talk in English before a whole roomful of their fellow students. This makes the learning process student-oriented, which is useful in enhancing students' English language skills in classes (Muftah, 2023; Wang et al., 2022).

Finally, the implementation of teacher creativity suggested that teachers adopt new varieties of methods to make learning processes more dynamic. This was supported by a learning plan, chair setup, and teacher motivation to help student improve their English skills.

### 5.3 Learning outputs

Assignments form one of the learning outputs in this class. It was unique that teachers assigned their students to create video blogs telling their unforgettable moments and goals for the future. In filming those stories, they had to apply verb tenses explained by teachers in class. Another assignment obliged students to record their activities related to special professions, fashion fields, and advertisements. Although it was hard for students who did not have enough English language skills to do those assignments, at least at the beginning of the process, while creating their second video blog, they began enjoying the enormous benefits of this assignment. However, on the other hand, some students felt they had heavy assignments in the semester because there were other assignments from other subjects to complete.

Additionally, implementing teacher's creativity affects learning outcomes (Beghetto & Kaufman, 2014; Chang & Chuang, 2011; Fan & Cai, 2022). The outcomes can be measured according to students' assignments during their enrolment in English language classes. The assignments teachers give mainly focus on students' daily activities in connection with fashion. In completing those assignments, students are free to demonstrate their creativity in the proper English language because those assignments are also designed to improve students' English language skills. The quality of learning outcomes depends largely upon the design teachers develop (Adnot et al., 2017; Blazar & Kraft, 2017).

Eventually, teachers' ability to design learning activities creatively influences students' success in English language classes of the Fashion Department. This ability assures whether or not the learning process produces satisfactory outcomes. The aforementioned ability includes knowledge, expertise, and professional attitudes. Knowledge of teachers includes Technological, Pedagogical, and Content Knowledge (TPACK) (Cviko et al., 2015; Tseng et al., 2022; Voogt & McKenney, 2017; Winter et al., 2021). Teachers need great expertise to implement their TPACK to make an efficient knowledge transfer appropriate for their students' characters (Jiménez Sierra et al., 2023; Wu et al., 2022). Professional attitudes, meanwhile, refer to teachers' code of behavior. Students often mimic the behavior of their teachers; therefore, teachers should reinforce exemplary behavior. For example, suppose they practice speaking English whenever they meet a member of their English language class. In that case, students' confidence to speak English with others will be boosted.

## 6. Conclusion

Teachers' creativity with technologies has improved fashion students' English language learning ability in higher education. This was implemented by changing their teaching strategy. During their implementation of new strategies, the learning process became more dynamic. This engaged students' interest in actively taking part in the class. Games with TPACK constitute one of the students' favorite methods because they can remember and memorize English language vocabulary easily.

Furthermore, the teacher needs to make assignments interest students more because this hope will help them improve their English language skills. The assignments are related to students' daily activities, arousing their passion for completing them.

## References

- Adnot, M., Dee, T., Katz, V., & Wyckoff, J. (2017). Teacher turnover, teacher quality, and student achievement in DCPS. *Educational Evaluation and Policy Analysis*, 39(1), 54–76. [https://doi.org/10.3102/0162373716663646/SUPPL\\_FILE/EEPA663646\\_ONLINE\\_APPENDICES.DOC](https://doi.org/10.3102/0162373716663646/SUPPL_FILE/EEPA663646_ONLINE_APPENDICES.DOC)
- Ali, M., Yaacob, R. A. I. B. R., Al-Amin Bin Endut, M. N., & Langove, N. U. (2017). Strengthening the academic usage of social media: An exploratory study. *Journal of King Saud University - Computer and Information Sciences*, 29(4), 553–561. <https://doi.org/10.1016/J.JKSUCI.2016.10.002>
- Al-Rahmi, W. M., Alias, N., Othman, M. S., Marin, V. I., & Tur, G. (2018). A model of factors affecting learning performance through the use of social media in Malaysian higher education. *Computers & Education*, 121, 59–72. <https://doi.org/10.1016/j.compedu.2018.02.010>
- Beghetto, R. A., & Kaufman, J. C. (2014). Classroom contexts for creativity. *High Ability Studies*, 25(1), 53–69. <https://doi.org/10.1080/13598139.2014.905247>
- Blazar, D., & Kraft, M. A. (2017). Teacher and teaching effects on students' attitudes and behaviors. *Educational Evaluation and Policy Analysis*, 39(1), 146. <https://doi.org/10.3102/0162373716670260>
- Boström, E., & Palm, T. (2023). The effect of a formative assessment practice on student achievement in mathematics. *Frontiers in Education*, 8, 1101192. <https://doi.org/10.3389/FEDUC.2023.1101192/BIBTEX>
- Chan, C. K. Y., & Lee, K. K. W. (2023). The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers?

- Smart Learning Environments*, 10(1), 1–23. <https://doi.org/10.1186/S40561-023-00269-3/TABLES/4>
- Chang, H. H., & Chuang, S. S. (2011). Social capital and individual motivations on knowledge sharing: Participant involvement as a moderator. *Information & Management*, 48(1), 9–18. <https://doi.org/10.1016/j.im.2010.11.001>
- Cviko, A., McKenney, S., & Voogt, J. (2015). Teachers as co-designers of technology-rich learning activities for early literacy. *Technology, Pedagogy and Education*, 24(4), 443–459. <https://doi.org/10.1080/1475939X.2014.953197>
- de Vries, J. A., Dimosthenous, A., Schildkamp, K., & Visscher, A. J. (2022). The impact on student achievement of an assessment for learning teacher professional development program. *Studies in Educational Evaluation*, 74, 101184. <https://doi.org/10.1016/J.STUEDUC.2022.101184>
- Double, K. S., McGrane, J. A., & Hopfenbeck, T. N. (2020). The impact of peer assessment on academic performance: A Meta-analysis of control group studies. *Educational Psychology Review*, 32(2), 481–509. <https://doi.org/10.1007/S10648-019-09510-3/FIGURES/4>
- Fan, M., & Cai, W. (2022). How does a creative learning environment foster student creativity? An examination on multiple explanatory mechanisms. *Current Psychology*, 41(7), 4667–4676. <https://doi.org/10.1007/S12144-020-00974-Z/TABLES/5>
- Fischer, B. M. (2020). Developing and sustaining creativity: Creative processes in Canadian junior college teachers. *Thinking Skills and Creativity*, 38, 100754. <https://doi.org/10.1016/J.TSC.2020.100754>
- Fu, H., & Qi, K. (2022). Evaluation model of teachers' teaching ability based on improved random forest with grey relation projection. *Scientific Programming*, 2022, 1-12. <https://doi.org/10.1155/2022/5793459>
- Goh, R., & Fang, Y. (2017). Improving English language teaching through lesson study: Case study of teacher learning in a Singapore primary school grade level team. *International Journal for Lesson and Learning Studies*, 6(2), 135–150. <https://doi.org/10.1108/IJLLS-11-2015-0037/FULL/PDF>
- Gustina, C., & Sweet, R. (2014). Creatives teaching creativity. *International Journal of Art and Design Education*, 33(1), 46–54. <https://doi.org/10.1111/J.1476-8070.2014.01778.X>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022a). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275–285. <https://doi.org/10.1016/J.SUSOC.2022.05.004>
- Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022b). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3, 275–285. <https://doi.org/10.1016/J.SUSOC.2022.05.004>

- Hoffman, A. M., & Spangehl, S. D., Eds. (2011). *Innovations in higher education: Igniting the spark for success*. The ACE Series on Higher Education. Rowman & Littlefield Publishers, Inc., 1–176. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED528414&site=ehost-live>
- Hofkens, T., Pianta, R. C., & Hamre, B. (2023). Teacher-student interactions: Theory, measurement, and evidence for universal properties that support students' learning across countries and cultures. *Effective Teaching Around the World: Theoretical, Empirical, Methodological and Practical Insights*, 399–422. [https://doi.org/10.1007/978-3-031-31678-4\\_18/TABLES/2](https://doi.org/10.1007/978-3-031-31678-4_18/TABLES/2)
- Jiménez Sierra, Á. A., Ortega Iglesias, J. M., Cabero-Almenara, J., & Palacios-Rodríguez, A. (2023). Development of the teacher's technological pedagogical content knowledge (TPACK) from the Lesson Study: A systematic review. *Frontiers in Education*, 8, 1078913. <https://doi.org/10.3389/FEDUC.2023.1078913/BIBTEX>
- Keiler, L. S. (2018). Teachers' roles and identities in student-centered classrooms. *International Journal of STEM Education*, 5(34), 1–20. <https://doi.org/10.1186/s40594-018-0131-6>
- Kim, S., Raza, M., & Seidman, E. (2019). Improving 21st-century teaching skills: The key to effective 21st-century learners. *Research in Comparative and International Education*, 14(1), 99–117. <https://doi.org/10.1177/1745499919829214>
- Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students' perception of Kahoot!'s influence on teaching and learning. *Research and Practice in Technology Enhanced Learning*, 13(1), 1–23. <https://doi.org/10.1186/S41039-018-0078-8/TABLES/2>
- Machali, I., Wibowo, A., Murfi, A., & Shandy Narmaditya, B. (2021). *From teachers to students creativity? the mediating role of entrepreneurial education*. <https://doi.org/10.1080/2331186X.2021.1943151>
- Muftah, M. (2023). Impact of social media on learning English language during the COVID-19 pandemic. *PSU Research Review, ahead-of-print*(ahead-of-print). <https://doi.org/10.1108/PRR-10-2021-0060/FULL/PDF>
- Nkomo, L. M., Daniel, B. K., & Butson, R. J. (2021). Synthesis of student engagement with digital technologies: a systematic review of the literature. *International Journal of Educational Technology in Higher Education*, 18(1), 34. <https://doi.org/10.1186/S41239-021-00270-1/FIGURES/3>
- Parker, R., Thomsen, B. S., & Berry, A. (2022). Learning through play at school – A framework for policy and practice. *Frontiers in Education*, 7, 751801. <https://doi.org/10.3389/FEDUC.2022.751801/BIBTEX>
- Sarwar, B., Zulfiqar, S., Aziz, S., & Ejaz Chandia, K. (2019). Usage of social media tools for collaborative learning: The effect on learning success with

- the moderating role of cyberbullying. *Journal of Educational Computing Research*, 57(1), 246–279. [https://doi.org/10.1177/0735633117748415/ASSET/IMAGES/LARGE/10.1177\\_0735633117748415-FIG3.JPEG](https://doi.org/10.1177/0735633117748415/ASSET/IMAGES/LARGE/10.1177_0735633117748415-FIG3.JPEG)
- Serdyukov, P. (2017). Innovation in education: What works, what doesn't, and what to do about it? *Journal of Research in Innovative Teaching and Learning*, 10(1), 4–33. <https://doi.org/10.1108/JRIT-10-2016-0007>
- Shingphachanh, S. (2019). Exploring the impact of lesson study through the views of Lao mathematics teacher educators on the needs, learning, and difficulties. *International Journal for Lesson and Learning Studies*, 8(2), 98–116. <https://doi.org/10.1108/IJLLS-06-2018-0040/FULL/PDF>
- Simón, C., Echeita, G., & Sandoval, M. (2018). *Cultura y Educación Culture and Education Incorporating students' voices in the "Lesson Study" as a teacher-training and improvement strategy for inclusion / La incorporación de la voz del alumnado a la "Lesson Study" como estrategia de formación docente y mejora para la inclusión*. <https://doi.org/10.1080/11356405.2017.1416741>
- Takahashi, A., & McDougal, T. (2016). Collaborative lesson research: maximizing the impact of lesson study. *ZDM - Mathematics Education*, 48(4), 513–526. <https://doi.org/10.1007/S11858-015-0752-X>
- Thurlings, M., Evers, A. T., & Vermeulen, M. (2015). Toward a model of explaining teachers' innovative behavior. <Http://Dx.Doi.Org/10.3102/0034654314557949>, 85(3), 430–471. <https://doi.org/10.3102/0034654314557949>
- Tseng, J. J., Chai, C. S., Tan, L., & Park, M. (2022). A critical review of research on technological pedagogical and content knowledge (TPACK) in language teaching. *Computer Assisted Language Learning*, 35(4), 948–971. <https://doi.org/10.1080/09588221.2020.1868531>
- Van Dijk, E. E., Van Tartwijk, J., Van Der Schaaf, M. F., & Kluijtmans, M. (2020). NC-ND license: What makes an expert university teacher? A systematic review and synthesis of frameworks for teacher expertise in higher education. *Educational Research Review*, 31, 1747–1938. <https://doi.org/10.1016/j.edurev.2020.100365>
- Voogt, J., & McKenney, S. (2017). TPACK in teacher education: Are we preparing teachers to use technology for early literacy? *Technology, Pedagogy and Education*, 26(1), 69–83. <https://doi.org/10.1080/1475939X.2016.1174730>
- Wale, B. D., & Bishaw, K. S. (2020). Effects of using inquiry-based learning on EFL students' critical thinking skills. *Asian-Pacific Journal of Second and Foreign Language Education*, 5(1), 1–14. <https://doi.org/10.1186/S40862-020-00090-2/TABLES/3>

- Wang, H., Wang, M., & Li, G. (2022). The use of social media inside and outside the classroom to enhance students' engagement in EFL contexts. *Frontiers in Psychology, 13*. <https://doi.org/10.3389/FPSYG.2022.1005313>
- Winter, E., Costello, A., O'Brien, M., & Hickey, G. (2021). Teachers' use of technology and the impact of covid-19. *Irish Educational Studies, 40*(2), 235–246. <https://doi.org/10.1080/03323315.2021.1916559>
- Wu, Y. T., Chai, C. S., & Wang, L. J. (2022). Exploring secondary school teachers' TPACK for video-based flipped learning: the role of pedagogical beliefs. *Education and Information Technologies, 27*(6), 8793. <https://doi.org/10.1007/S10639-022-10977-X>
- Xie, R., & Jiang, J. (2022). Creativity: The effectiveness of teacher–student conflict. *International Journal of Environmental Research and Public Health, 19*(3). <https://doi.org/10.3390/IJERPH19031628>

## Appendixes

### The questions for the interview's guideline

Questions for teaching strategies:

1. Could you explain teacher activities, especially in English language classes in Fashion Department?
2. What kinds of learning strategies are used in that class?
3. Why did the teacher use it?
4. How was the reaction of students to the strategies?

Questions for learning processes:

1. Could you explain the class situation?
2. Why was the situation like that?
3. How did the teacher open the class?
4. How was the main learning process?
5. Did the teacher give a topic suitable to learning plans?
6. How do students react to the topic in the classroom?
7. Why did students have such a reaction?

Questions for learning outputs:

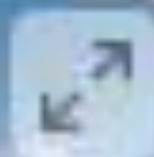
1. Can you explain the assignment undertaken by a student?
2. Why must a student do that assignment?
3. What was the benefit of the assignment for the student? Why?

**The questions for observation's guideline**

<b>Questions</b>	<b>Answers</b>		<b>Notes</b>
	<b>Yes</b>	<b>No</b>	
Do lecturers have a teaching strategy?			
Do all students understand the learning topic given by lecturers?			
Are there still students not actively participating in learning activities?			
Do students study happily in the classroom?			
Do lecturers try to encourage inactive students to study?			
Do lecturers use technology?			
Are learning outputs achieved in the classroom?			



Advances in Science, Technology & Innovation  
E-Book for the industry with the sustainable development



Muhammad Haruz Turko - Jorge Miguel Ojeda Garcia  
Aymán M. Zakaria - Yasmin Moank Latif Hameed - Editors

# Sustainability in Creative Industries

Innovations in Fashion and Visual Media  
Volume 1



Emerald

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# Advances in Science, Technology & Innovation

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Muhammad Nawaz Tunio ·  
Jorge Miguel Chica Garcia · Ayman M. Zakaria ·  
Yasmin Moanis Latif Hatem  
Editors

# Sustainability in Creative Industries

Innovations in Fashion and Visual  
Media—Volume 3

A culmination of selected research papers  
from the International Conference on  
Sustainability in Creative Industries (SCI),  
Universitas Ciputra 2022

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## Preface

Long-term sustainability is a spark of the green economy which comes up with solid solutions to limited resources. Sustainability, with lenses to the Agenda of UN with its 17 SDGs, manages social, economic as well as environmental perspectives of the globe. Sustainable approach is mandatory; however, the sustainability in long term is possible through the diffusion of the innovation because the innovation is heart of the suitability. Innovation and creativity are the essential in all fields so creativity and sustainability are important and necessary segments of human life for their survival. Creativity is deep rooted in different practices of the culture, social, economic, and environment. Therefore, it is essential to mitigate the barriers of affordability, scalability, replicability, and sustainability so that the combination of the creativity and sustainability which can be approached from the different perspectives of thematic, disciplinary, trans-disciplinary, intercultural way. Creativity paves way for the all kinds of the development including the creative intelligence. Creative intelligence is new and dynamic field of knowledge, which empowers the potential of create, connect, and inspire. The combination of creativity and artistic manifestation postulates inspiration, energy, and empowerment. Design is important perspective of the creativity as well as culture.

After the adoption of emerging technologies, cultural industries are transformed into the creative industries with more modernity and economic growth. Cultural industries pave the way for the creation, production, and commercialization which results in creative content. The outcome of the creative industries appears in different versions such as journalism, studios of the artists, studios of design, architectural offices, media production, film houses, and cinema.

Thus, this book focuses on all perspectives as discussed above and touches on the new zone of knowledge.

Bhitshah, Pakistan

Muhammad Nawaz Tunio

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