

¹ Andi Nuralfiah
² Putu Sudira
³ Irmayanti

21st Century Skills in Tailoring Courses to Support Independent Learning in The Department of Fashion Education



Abstract: - This study aims to analyze 21st century skills in tailoring courses to support independent learning in the Department of Fashion Education FT-UNM. This type of research is qualitative research using data collection methods in the form of interviews with lecturers and students, and observation of the RPS used. The results showed the application of 21st century skills which include Critical Thinking, Creativity, Collaboration & Communication in learning tailoring courses. Research shows that 21st century skills are related to one another in tailoring course learning, so that each of the 21st century skills known as Skills 4C cannot be achieved if separated. This research shows the need to apply 4c skills in learning, so that it can be material for learning other practical courses to compile a plan for the application of 4c skills in learning.

Keywords: 21st Century Skills; Freedom to Learn; Tailoring

I. INTRODUCTION

The clothing sector is one of the complex industries that spread rapidly to every corner of the world's fashion industry with the presence of minimum qualifications and skills to handle the job having technical skills puts graduates in the [1]. Field of fashion in a different category from graduates who only know the creative side of the fashion business [2]. The skills in question are not just skills in creating attractive fashion products, but also consumer-facing skills. When consumers see a wide variety of products presented, they may also be looking for quality customer service [3].

The fashion industry not only sells interesting goods, but also services that require special skills and skills in dealing with consumers. Consumers in the fashion industry tend to like experimentation with new products and services, so good communication skills are needed with customers [4]. Good communication skills are also needed in producing fashion products. Good communication skills are also needed in collecting information through conversations with tailors, supervisors, pattern makers, tailors who teach in schools, and young workers in the fashion industry [5].

Another skill needed in the fashion industry is the high creativity required in marketing in various ways, one of which is a website. Web-based marketing in the context of fashion has a positive impact that many consumers are educated towards sustainable consumption [6]. Creative marketing will increase the amount of production in the fashion industry. Therefore, it is not surprising that the most famous fashion brands decided to focus on improving the performance of the workers [7]. Some of the skills needed in the fashion industry are aligned with the skills needed in the 21st century.

The US-based Partnership for 21st Century Skills (P21) identifies skills needed in the 21st century, including Critical Thinking Skills, Creative Thinking Skills, Communication Skills, and Collaboration Skills. The required competencies are known as skills 4C [8].

Critical Thinking Skills are necessary to ensure students can achieve success both in the classroom and outside the classroom [9]. Critical thinking skills are fundamental skills in solving problems. These skills need to be possessed by students in finding the source of the problem and how the student finds the right solution to the problem at hand. These skills can be instilled in different disciplines [10].

Creativity is the ability of a person in everyday life that is associated with a special achievement in creating new things or something that exists into a new concept, finding ways to solve problems, making new ideas that have never existed, and seeing the existence of various possibilities that occur [11].

Communication is a process of language exchange that takes place in human life. Therefore, communication always involves humans both in the context between individuals, groups, and masses. These skills include speaking, listening, as well as writing [12].

Collaboration is capable to show the ability to work together in a group and have a leadership attitude, as well as being able to adapt to various responsible situations, always be productive in a group work atmosphere, respect

¹ Yogyakarta State University, andinuralfiah1@gmail.com

² Yogyakarta State University, putupanji6402@gmail.com

³ Makassar State University, irmayanti.unm.ac.id

different views / principles. All these things are done in a work environment in industry as well as in the wider scope of public relations [13]. Skills of collaborating and building collaboration, caring for good relations with each other, managing and overcoming conflicts are very important developed in vocational learning of the 21st Century [14].

Focus on critical thinking, creativity, communication, and collaboration is essential to preparing learners for the 21st century. Therefore, integrating 21st century skills in the learning process is essential to generate effective learning through frameworks in learning. Here is a picture of a framework in learning that becomes an integrated vision for learning and ensures student success where change occurs constantly and never stops [15].



Figure 1. 21st century learning framework.

21st century education has the responsibility to produce quality output or labor to be able to compete in the 21st century, this can be done by equipping students with 4C competencies in learning [16]. This need for soft skills should be an indicator that needs to be achieved for fashion students. The biggest contributors to the fashion creative industry are graduates who study vocational education with a major in fashion [17]. Fashion education can be obtained at universities, Vocational High Schools, and courses.

Fashion education is one of the majors in the Faculty of Engineering, Makassar State University, in which there are tailoring courses. Tailoring is one of the practical courses that studies high-level fashion making, both in terms of design, manufacturing and finishing techniques that require precision, tenacity, and skills to produce high-quality clothing. [18]

Tailoring courses equip students with hard skills, but 21st century competencies require students to have 4C competency soft skills. Therefore, the form of this research is to find out whether the soft skills needed in 21st century competencies can be achieved in learning in tailoring courses. This research is needed to support an independent learning curriculum that can produce students who focus on developing student competencies in their phases. This is in line with the implementation of the *Merdeka Belajar Kampus Merdeka* Curriculum through several activities outside the campus in general that have had a positive impact on improving 21st century skills, namely communication skills, creativity, critical thinking skills, and collaboration skills [19].

This research will present a form of application of 21st century skills applied in learning by lecturers through *Rencana Pembelajaran Semester (RPS)* to students as people who need learning to support independent learning.

II. RESEARCH METHOD

The research method used in this study is qualitative research. The setting of this research was in the Fashion Study Program, Department of Family Welfare Education, Makassar State University which was held from September to Desember 2022. The informants of this research are students who have programmed Tailoring, *Rancangan Pembelajaran Semester (RPS)*, and tailoring course lecturers. The data collection techniques used are interviews and observations using instruments that show indicators of 21st century skills.

III. RESULT AND DISCUSSION

Skills 4c is a unit that cannot be separated from one another [20]. It is therefore necessary to make slices that become the integration of 21st century skills. Here is a picture of the integration in the form of a slice of the 4C competence.

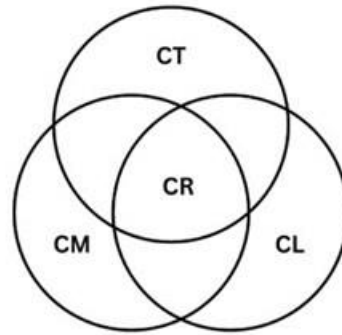


Figure 2. Critical Thinking (CT), Creativity (CR), Communication (CM), Collaboration (CL).

The picture shows 6 slices of soft skills that are indicators needed in learning, including Critical Thinking & Creativity, Creativity & Communication, Communication & Collaboration, Collaboration & Critical Thinking, Critical Thinking & Communication, and Creativity & Collaboration.

A. Critical Thinking & Creativity

Table 1. Critical Thinking & Creativity Skills

21st Century Skills Objects	Description
<i>RPS</i> Tailoring course	The final ability that students hope to be able to explain the meaning of tailoring with learning experience through task 1: Compile a summary of the meaning of tailoring according to fashion experts and task 2: find references to tailoring fashion models.
Lecturer	Designing and developing digital learning in creating women's suit models in the Tailoring Subject.
Student	Conduct discussions to explore knowledge about tailoring by creating new products through design analysis, creation and pattern breaking.

Based on Table 1 obtained the link between critical thinking & creativity in tailoring learning is obtained based on the results of interviews with lecturers and students as well as analysis of learning *RPS*. *RPS* tailoring courses expect student's final abilities with learning experience through assignments that require critical thinking and creativity skills from students. This skill is supported by the design and development of learning from lecturers digitally in creating a women's suit model. Students then conduct discussions to explore knowledge about tailoring by creating new products through design analysis, pattern making, and pattern breaking. Students have the freedom to determine the design to be made, thus spurring them to develop their critical thinking skills and creativity that are in line with *Kuikulum Merdeka Belajar*.

Different studies were carried out by Purwanti [21] those who explained the results of research in the form of the integration of critical thinking in science contextual learning which includes 1. Planning, 2. Implementation, and 3. Evaluation of learning activities. This research leads to technical matters, so that students do not have the freedom to develop critical thinking skills that are not in line with the expectations of an independent curriculum study. In addition, the integrated 4C skills have no relation between one skill and another.

B. Creativity & Communication

Table 2. Creativity & Communication Skills

21st Century Skills Objects	Description
<i>RPS</i> Tailoring course	The expected learning outcomes of students can explain techniques in tailoring clothing construction with learning experiences through discussions about tailoring clothing finishing techniques.
Lecturer	Designing assignments for students in making various models of Women's suits.
Student	Compile learning outcomes reports, project assignment presentations and group discussions. Through discussions, students can express opinions and results from practical learning that has been carried out.

Table 2 is the result of the relationship between creativity and communication skills present in the learning of tailoring courses. Based on the table, the learning outcomes in the *RPS* expect student's ability to explain techniques in tailoring clothing construction through discussions that will demonstrate skills student communication. The task given by the lecturer is to make various models of women's suits that require creativity skills from students. Through discussions, students have the freedom to express opinions and results from practical learning that is carried out.

Similar research was also conducted on [22] efforts to improve 21st century skills for prospective teachers through a digital book project that integrates aspects of assessing student creativity and communication in the books digital. One aspect of the assessment is to present the results of products from students that will encourage student's communication skills and creativity in front of teachers and audiences.

C. Communication & Collaboration

Table 3. Communication & Collaboration Skills

21st Century Skills Objects	Description
<i>RPS</i> Tailoring course	The learning outcomes of the course expected by students can analyze the technique of making and finishing tailoring clothes, through making papers and group discussions with material on various clothing that belongs to the construction category of tailoring clothing and semi-tailoring clothing.
Lecturer	Application of peer tutors in practicum so that there is active collaboration and communication between students in doing assignments.
Student	Students conduct learning using the peer tutor method. This method creates an effective learning atmosphere to train student communication and collaboration, because students tend to understand better when delivered in everyday language with peers.

Table 3 describes the relationship between communication & collaboration skills in tailoring course learning through *RPS*, lecturers, and students. *RPS* learning shows the learning outcomes of the course, namely, students can analyze tailoring techniques and completions through the task of making papers and discussions that requires communication & collaboration skills from students. Lecturers apply peer tutors in the implementation of practical learning so that they can train active collaboration and communication skills between students in doing assignments. The application of peer tutors makes students tend to be more understanding and can create an effective learning atmosphere to practice their communication and collaboration skills.

Different studies were found by Mutohhari [23] those who found difficulties in implementing 21st century skills competencies in vocational education learning. In this study it conveys the conclusion that students have more difficulty implementing learning oriented to communication skills.

D. Collaboration & Critical Thinking

Table 4. Collaboration & Critical Thinking Skills

21st Century Skills Objects	Description
<i>RPS</i> Tailoring course	The expected final ability is that students can explain about women's suits through group discussions about the historical material of the development of suits from time to time.
Lecturer	Collaborating on a project-based learning model by making Women's suit products.
Student	Students are not required to use the same techniques as those that previously existed. Students can also use other techniques obtained through the collaboration of peer tutors on the condition that the results of the project must be in accordance with tailoring fashion standards.

Table 4 presents the link between collaboration & critical thinking skills in tailoring course learning. The final ability expected in *RPS* is that students can explain women's suit material through discussions that require collaboration skills from students. In addition to the discussion, lecturers collaborate with project-based learning

models by making Women's suit products. Students are given the freedom to use the Women's suit completion technique obtained through collaboration with peer tutors on the condition that the results of the project must be in accordance with fashion standards tailoring. This freedom is a form of achievement of the independent campus learning curriculum and gives students the space to explore abilities that require their critical thinking skills.

This linkage is in line with research that shows the Tamela & Dwi [24] integration of critical thinking skills in *RPP* is only contained in one indicator that seems to be incorporated in the 10 *RPP* studied. Such indicators are activities that involve collaborative learning.

E. Critical Thinking & Communication

Table 5. Critical Thinking & Communication Skills

21st Century Skills Objects	Description
<i>RPS</i> Tailoring course	The final ability that is expected as a manifestation of learning outcomes is that students can design / design tailoring clothes through the task of making sketch designs, presentations, production 1 and production 2 then presented.
Lecturer	Providing stimulus to students in the form of problems related to the material.
Student	Students form groups to discuss thoughts, ideas, ideas, knowledge, and information about new knowledge about tailoring clothing so that interaction between students occurs.

Table 5 describes the link between critical thinking & communication skills in tailoring course learning. Based on the *RPS*, the expected final ability is that students can design tailoring clothes through tasks that require critical thinking skills from students. Lecturers provide stimulus to students in the form of problems related to the material / assignment. Student's complete assignments by forming groups to discuss thoughts, ideas, knowledge, and information to complete tasks to train communication skills between students.

Similar learning activities have also been found in research that explains the Helaluddin & Fransori [25] relationship between 4C skills in learning. The research describes student's critical thinking skills can be seen through the task of determining photos with all their considerations related to current social issues there is a lot of public discussion. Furthermore, communication skills are trained through the process of writing which are ideas into a series of words.

F. Creativity & Collaboration

Table 6. Creativity & Collaboration Skills

21st Century Skills Objects	Description
<i>RPS</i> Tailoring course	The learning outcomes in the course are that students are skilled in making semi-tailoring fashion products and tailoring clothes. This learning uses practical methods so that it requires a high level of creativity so that the products produced are clean and tidy and require collaboration between students to facilitate completion.
Lecturer	Giving the final assignment in the form of making videos of making products so that students can be creative using their respective ideas.
Student	Designing new fashion designs that have their own uniqueness and are different from other tailoring clothes. Students can work together, adapting to each other's responsibilities as peer tutors and as students who need tutors.

Table 6 above shows the relationship between creativity & collaboration skills in learning tailoring courses through *RPS*, lecturers, and students. Learning outcomes in the *RPS* course expect students to be skilled in making semi-tailoring products and tailoring clothing using practical methods so that it requires high creativity to interrupted it. Lecturers also give a final project in the form of making videos of making products so that students can be creative using their respective ideas. The creativity of students has its own uniqueness compared to tailoring clothes in general. Students collaborate in the form of cooperation between students and their peer

tutors. This learning shows the freedom to apply heutagogy in learning the independent curriculum of independent campus learning.

Different findings regarding learning methods that integrate collaboration & creativity skills in learning have also been carried out in research Li [26] on dance learning via zoom. Through zoom learning, students will have many opportunities to collaborate innovatively. This collaboration will encourage student's creativity to flourish through a boundless space.

IV. CONCLUSION

Learning in tailoring courses has integrated 21st century skills known as 4c skills. Integration in various aspects of research material, namely *RPS*, Lecturers, and students shows a relationship with each other in applying 4c skills in tailoring course learning. This link concerns 6 important indicators, including Critical Thinking & Creativity, Creativity & Communication, Communication & Collaboration, Collaboration & Critical Thinking, Critical Thinking & Communication, and Creativity & Collaboration. Learning in tailoring courses shows the difficulty of achieving learning expectations if 4C skills are not associated with one another. Skills 4c in tailoring course learning encourages students to have the freedom to think critically, create, communicate, and collaborate in carrying out learning to support *Merdeka* Curriculum for Independent Learning Independent Campus. So, although the tailoring course is a practical course that expects hard skills from students, it does not rule out the possibility that soft skills from students can also be achieved in the learning of tailoring practice courses. This research shows the need to apply 4c skills in learning, so that it can be a material for learning other practical courses to develop plans Application of Skills 4C in learning.

ACKNOWLEDGMENTS

Author thanks to the Indonesia Endowment Fund for Education (LPDP) under the Ministry of Finance of the Republic of Indonesia as the sponsor for the author's master study.

REFERENCES

- [1] I. Russanti, L. Nurlaela, I. Basuki, and Munoto, "Competency Based Assessment in Fashion Design," in IOP Conference Series: Materials Science and Engineering, Institute of Physics Publishing, Apr. 2018. doi: 10.1088/1757-899X/336/1/012044.
- [2] L. Welters and S. L. Hannel, "DigitalCommons@URI DigitalCommons@URI Textiles, Fashion Merchandising and Design Faculty Publications Textiles, Fashion Merchandising and Design 2015 Careers in Fashion Design Careers in Fashion Design Terms of Use," 2015. [Online]. Available: https://digitalcommons.uri.edu/tmd_facpubs
- [3] A. Harizanova and A. Kunchev, "Management Information System in tailoring industry," 2003. [Online]. Available: www.acadjournal.com
- [4] U. Rathnayaka, "Role of Digital Marketing in Retail Fashion Industry: A Synthesis of the Theory and the Practice," Journal of Accounting & Marketing, vol. 07, no. 02, 2018, doi: 10.4172/2168-9601.1000279.
- [5] M. D'Uonno, "A Handbook for Tailoring Craftsmanship Industries. Communicate the Intangible Values of Traditional Methods through Images," MDPI AG, Nov. 2017, p. 912. doi: 10.3390/proceedings1090912.
- [6] L. Dach and K. Allmendinger, "Sustainability in Corporate Communications and its Influence on Consumer Awareness and Perceptions: A study of H&M and Primark," Procedia Soc Behav Sci, vol. 130, pp. 409–418, May 2014, doi: 10.1016/j.sbspro.2014.04.048.
- [7] M. E. Nenni, L. Giustiniano, and L. Pirolo, "Demand forecasting in the fashion industry: A review," International Journal of Engineering Business Management, vol. 5, no. SPL.ISSUE, 2013, doi: 10.5772/56840.
- [8] P21 Partnership for 21st Century Skills (P21), "A Guide to Aligning the Common Core State Standards with the Framework for 21st Century Skills P21 Common Core Toolkit," 2011.
- [9] N. Jalinus, U. Verawardina, R. Azis Nabawi, and Y. Darma, "Developing Blended Learning Model in Vocational Education Based On 21st Century Integrated Learning and Industrial Revolution 4.0," 2021.
- [10] S. Zubaidah, "Mengenali 4C: Learning and Innovation Skills untuk Menghadapi Era Revolusi Industri 4.0," Oct. 2018, [Online]. Available: <https://www.researchgate.net/publication/332469989>
- [11] D. Vidya Fakhriyani, "Pengembangan Kreativitas Anak Usia Dini," vol. 4, no. 2, Dec. 2016.
- [12] R. Septikasari and R. Nugraha Frasandy, "Keterampilan 4C Abad 21 dalam Pembelajaran Pendidikan Dasar," 2018.
- [13] I. G. Sudirtha, N. K. Widiartini, and M. D. Anggendari, "Development of 21st century skill learning designs through the application of the concept of independent learning in the vocational field," in Journal of Physics: Conference Series, IOP Publishing Ltd, Mar. 2021. doi: 10.1088/1742-6596/1810/1/012062.

- [14] P. Sudira, *Metodologi Pembelajaran Vokasional Abad XXI Inovasi, Teori, dan Praksis, Pertama*. Yogyakarta: UNY Press, 2018.
- [15] P21 Partnership for 21st Century Skills, “Framework for 21st Century Learning,” 2019.
- [16] P. Partono, H. N. Wardhani, N. I. Setyowati, A. Tsalitsa, and S. N. Putri, “Strategi Meningkatkan Kompetensi 4C (Critical Thinking, Creativity, Communication, & Collaborative),” *Jurnal Penelitian Ilmu Pendidikan*, vol. 14, no. 1, pp. 41–52, Apr. 2021, doi: 10.21831/jpipfip.v14i1.35810.
- [17] N. Fitrihana, “N. Fitrihana Urgensi Literasi Komputer Pada Pembelajaran di SMK Tata Busana Untuk Menyiapkan Generasi Emas Indonesia dalam seminar nasional. Yogyakarta, Indonesia, 2016 Hal 318 – 333,” in *Professional Responsibility Pendidik dalam Menyiapkan SDM Vokasi Abad 21*, 2016.
- [18] I. Kurnia and P. Tresna P, “Alat Evaluasi Pembelajaran Pembuatan Pola Busana Tailoring,” 2016.
- [19] A. Jufriadi, C. Huda, S. D. Aji, H. Y. Pratiwi, and H. D. Ayu, “21st Century Skills Analysis through The Implementation of Merdeka Belajar Kampus Merdeka Curriculum,” *Jurnal Pendidikan dan Kebudayaan*, vol. 7, no. 1, pp. 39–53, Jun. 2022, doi: 10.24832/jpnk.v7i1.2482.
- [20] A. Kumala Sari and W. Trisnawati, “Integrasi Keterampilan Abad 21 dalam Modul Sociolinguistics: Keterampilan 4C (Collaboration, Communication, Critical Thinking, dan Creativity),” *Jurnal Muara Pendidikan*, vol. Vol. 4 No. 2, 2019.
- [21] P. Purwanti, E. Fauziati, and A. Fathoni, “Mengintegrasikan Critical Thinking dalam Pembelajaran Kontekstual IPA di SMPN 2 Wirosari,” *Bioscientist: Jurnal Ilmiah Biologi*, vol. 9, no. 1, p. 54, Jun. 2021, doi: 10.33394/bjib.v9i1.3596.
- [22] F. Dewi, “Proyek Buku Digital: Upaya Peningkatan Keterampilan Abad 21 Calon Guru Sekolah Dasar Melalui model Pembelajaran Berbasis Proyek,” *Metodik Didaktik*, vol. Vol. 9, No. 2, 2015.
- [23] F. Mutohhari, S. Sutiman, M. Nurtanto, N. Kholifah, and A. Samsudin, “Difficulties in implementing 21st century skills competence in vocational education learning,” *International Journal of Evaluation and Research in Education*, vol. 10, no. 4, pp. 1229–1236, Dec. 2021, doi: 10.11591/ijere.v10i4.22028.
- [24] E. Tamela and M. H. Dwi, “Four C’s Skills Integration in the Lesson Plans of Grade 7 English Teacher,” *Jo-ELT (Journal of English Language Teaching) Fakultas Pendidikan Bahasa & Seni Prodi Pendidikan Bahasa Inggris IKIP*, vol. 8, no. 2, p. 124, Dec. 2021, doi: 10.33394/jo-elt.v8i2.4345.
- [25] H. Helaluddin and A. Fransori, “Integrasi the Four CS dalam Pembelajaran Bahasa di Era Revolusi Industri 4.0,” *EduHumaniora | Jurnal Pendidikan Dasar*, vol. 11, no. 2, pp. 95–106, Sep. 2019, doi: 10.17509/eh.v11i2.16977.
- [26] Z. Li, M. Zhou, and K. K. L. Lam, “Dance in Zoom: Using video conferencing tools to develop students’ 4C skills and self-efficacy during COVID-19,” *Think Skills Creat*, vol. 46, p. 101102, Dec. 2022, doi: 10.1016/j.tsc.2022.101102.