

THE IMPACT OF “COLLABORATIVE TEAM” WORKING SYSTEM AS AN EFFORT OF CREATIVE DESIGN IN TSDSIA

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Abstract

TSDSIA is a design firm engaged in interior and architecture since 2011. TSDSIA provides consulting services in Indonesia led by Tony Sofian. TSDSIA uses a “collaborative team” working system to perform the creativity process. This collaboration work system represents a work method that is incapable of being avoided and is not used more at this point. Collaboration is a strategy that can leverage individual and collective knowledge to achieve results that may never have been imagined before. Collaboration also creates more interesting, challenging, and enjoyable working conditions in achieving the results of design creativity. Although in the process, it takes a lot of investment from time and resources (financial and human), if used appropriately, the collaboration will be a profitable investment. The research method in this paper uses a qualitative approach by using an ethnographic research approach through direct field observation and interview methods. The authors' used instrument case study methods and data processing techniques (data reduction, data presentation, conclusion withdrawal) to analyses the data. The purpose of this discussion is to find out the relationship between the four components of creativity in post- pandemic TSDSIA and their effect on employee design creativity to produce a quality design in terms of aesthetic, functional and best architectural and the interior experience in each project being worked on more post-pandemic. Ultimately, the researcher found the influence of the “collaborative team” work system and the correlation of the four components of creativity as a design creativity effort in TSDSIA.

Keywords: *Creative Design, Collaborative Team, TSDSIA, Work Systems, Post Pandemic.*

INTRODUCTION

Armed with educational & architectural interiors shot at Bandung Institute of Technology, and experience working on several design consultants, Tony Sofian (from now on, referred to as TS), he decided to start TSDSIA. TSDSIA is a group of individuals with a wide range of talents, including architects, interior designers, makers, models, and product designers. This group has come together to create the best design and architecture experience possible. With their combined talents

and resources, they strive to create innovative and practical solutions for their clients. With TSDSIA, they are able to provide a comprehensive and creative design experience that their customers can rely on.

Based on the interview with TS, TSDSIA continues to play with aesthetics, functionality, economics and society to create a design experience that meets the needs and desires and solves the problems provided by clients. To achieve that, principals have strategies for organizing and coordinating each phase of design creativity. One strategy used by principals is to form a “collaborative team” to generate a creative idea. To achieve creativity, the TSDSIA will involve several processes: critical thinking, problem-solving, and decision making. In the book *Leading Collaborative Architectural Practice*, West (2017) stated that a diversity of experience and expertise has led to more effective decision-making and more significant innovation within the team as it provides perspective on common issues and encourages constructive debate before making decisions. Thus, the final result of the design is a solution or problem solving best as well as meeting the needs and desires of the client.

Furthermore, this strategy does not fall short of the design stages, and TSDS undertakes processes. Based on the research, the authors derive two main structures: the wheels of movement in TSDS, which are the design stages and collaborative teams, which are the systems used by TS. The working system used by the TSDS is the principal that will give confidence to the lead designer to lead the other members. At this time, TSDS has three design teams led by a lead designer, namely: Clara Dhea Wijaya (from now on referred to as CL), who is a specialist in interior design; Greta Elsa Nurtjahja (from now on referred to as GN) who is a specialist in interior design, and Adriel Frederick (from now on referred to as (AF) who is a specialist in architecture. For team members, TSDSIA opens up opportunities for internships to become team members, and to date, there are eight internships broken down into multiple work teams. In addition, in the TSDSIA, some senior designers hold and supervise the entire project in the TSDSIA, with more construction and civil parts.

Therefore, in this paper, the author attempt to look at the relationship between TSDSIA’s components of creativity and the influence of the “collaborative teams” work system as an effort of creative design in TSDSIA. Lastly, this paper aims to determine the relationship between the four components of creativity in TSDSIA and their effect on employee design creativity to produce a quality design in terms of aesthetic, functional, and best architectural and interior experience in each project under work.

LITERATURE REVIEW

To assist the authors in conducting this research, the authors also use several journals that will be used as references in developing this research, namely *Rethinking design studios as an integrative multi-layered collaboration environment* compiled by Park’s (2020). This journal connects with the author’s goal by examining

the relationship and correlation between collaborative teams and several other components supporting creativity.

In one of the sub chapters in Park’s (2020) journal, he also researched and further explained about “Collaboration” and “Creativity” using the theory presented by Rhodes (1961) that explained that creativity can be developed through four components namely (person, process, product and press) which are integral factors in building creativity. In this 4P theory, the term is defined as follows:

- A. **People** (are cognitive abilities, personality traits and biographic experiences)
- B. **Process** (forgetting the methodology that will produce creative products)
- C. **Product** (communication of unique, new, and useful ideas or concepts)
- D. **Press** (Environment or atmosphere in which creative ideas are produced)

This theory be used to evaluate TSDSIA design creativity activities produced through the collaborative teamwork system and the resulting impact. The author use several additional theories to help examine each of these components in depth.

A. People Collaborative Teams

Beyond simply working together, collaboration is defined as a further commitment to the process of mutual respect and the stage of creativity that blocks many factors, such as a collection of people, processes, and tools to solve a problem. To assist the author in analyzing collaborative teams TSDSIA, the author will use several sub-chapters compiled by Smith (2017) in his book “Leading Collaborative Architectural Practice.” which will explain Developing Teams Culture and Communication Fundamentals.

1. Developing Teams Culture

Based on a book compiled by West (2017), he states that to form a collaborative team, there are several things that a leader must pay attention to so that a collaborative team can run effectively and efficiently. The theory will discuss more things the author will observe in forming collaborative teams. This phase starts from team formation by identifying each member’s role, selecting members who are not too similar to each other, then choosing the strategy used by the leader or coordinator in managing the team, to strategies for coordinating between team members. At the end, the author will try to see whether TS has applied the theory cited by West and whether this theory works on the TSDSIA collaborative team.

2. Communication Fundamental

Communication is the exchange of information or ideas from one individual to another. It is undeniable that communication is one of the most critical media in the design process and collaborative team. Therefore, the author will explore more

about communication systems, namely verbal and non-verbal, as well as online and offline communication systems. At the end, the author will discuss the influence of media communication on the communication process between members of the collaborative team which will affect the discussion and problem-solving approach.

B. Process and Product

Problem Solving and Critical Thinking

In her book, Piotrowski (2011) said that a designer’s work is creativity. Therefore, this book will outline design creation by involving critical thinking, problem-solving, and decision-making. This theory was used to analyze the steps that TSDSIA designers used to assist in carrying out the design process, especially to solve problems, find solutions, and create innovative designs for the social community or clients. These stages consist of critical thinking, the design process, defining problems and analysis, asking questions (again), seeking answers to questions that arise, and making decisions. TS has also verified the use of problem-solving theory as a company leader and that the design process carried out by the TSDSIA collaborative team is a problem-solving process adapted from Piotrowski (2011). At the end, the author will use this to see if the TSDSIA design process has followed all the procedures written by Piotrowski and to see if the “process” and “product” component (listed in the literature review-theory 4P) occurs and represents two of the components of creativity in TSDSIA.

Design Interior Process

In this book, Coleman (2013) explores the world of interior designer practice, especially in the stages and design procedures. Starting in terms of strategy, method, process, and management. The sub-chapters that will be raised are forming a design team, determining goals and solving client problems, the design process, constructing visual concepts, and methods of communication between clients, employees or the design team to the principal. The stages and procedures listed in this book will assist the author in outlining the steps and design processes carried out at the TSDS Design Firm.

C. Press

Creativity Environment

Based on Park’s (2020) journal, collaborative space requires an environment and facilities that will impact creativity. Therefore, a creative environment needs to be able to organize human relationships with space because it will affect the process of producing innovative ideas. In addition, it is also essential that a work environment can meet the needs of space users so that later on, space users can move efficiently and effectively. This theory will help the author to analyze the TSDSIA work environment or the “press” components as one of the components of creativity in TSDSIA (theory 4P).

METHODOLOGY

The research method used in this paper is a qualitative research method using ethnographic research. The use of ethnographic research methods was chosen

because it allows researchers direct access to the culture and practices of a group and a more authentic understanding of their behavior and culture, which will produce valid data.

The data collection method used was observation research and interviews with 14 employees (i.e., Principle, HR, Senior Interior Designer & Architect, Junior Interior Designer & Architect, and Intern Interior & Architect) at TSDSIA.

The interview method used is a semi-structured interview which offers an opportunity to answer questions in the language and terms of the informants so that the researcher can direct and explore the main topic more profoundly in the subjective experience of the individual (Mann and Stewart, 2000). In addition, this method is used to get more comprehensive data and develop themes based on questions that have been asked, which will help researchers achieve research goals by finding the influence of the “collaborative team” work system and the correlation of the four components of creativity as a design creativity effort in TSDSIA

To conduct the observational research, the researcher conducted an internship program at TSDSIA for eight months with mixed work system procedures (offline and online). The author chose TSDSIA as selected as the case study because the author saw that TSDSIA has a fascinating work system and design process in achieving its goals, namely meeting the needs and desires and solving problems experienced by clients, namely through collaborative teamwork systems, problem-solving methods, to activities or creativity support programs that are rarely found in other design firms.

This method involves two systems, namely the hybrid system (offline and online). The use of these hybrid systems was since, during the research period, there was a surge in COVID-19 cases, which caused all work activities to be carried out from home.

These are the things that the author wants to bring up and show the reader so that later the reader will be inspired and want to try the strategy used by TSDSIA in creating an innovative design for clients and the wider community.

ANALYSIS AND RESEARCH

Collaborative Teams

The Collaborative Teams or CT work system is used by TS is one of the components of building design creativity at TSDS IA. CT team members’ formation is usually tailored to a project’s needs and scale. If the project is small-scale and only handles the interior, then team members will be more dominant and consist of interior designers.

As for projects large-scale or covering architectural aspects, the CT team will consist of designers in the field of interior and architecture. A CT also includes principals, senior designers, contractors or civil, as well as the client. Team members are

flexible and can adapt to the project's needs. Even multiple team members can work in two CT teams or exchange team members.

A junior designer will usually lead Collaborative Teams and will consist of members who are students who are currently interns. Even so, interns are also given the opportunity and trust to participate in the design stage and take direct control of the project. However, the lead designer from CT will still supervise this. Meanwhile, the Senior Designer also participates and becomes a CT member in all CT teams in TSDSIA. He oversees all stages of the design procedure, especially at the construction site. In addition, even though TS is the leader from the company, but he positioned himself as leaders, as well as group members who participate in design stages, as well as critical thinking processes for solve a problem.

System and Media Communication

A. Online

The COVID-19 pandemic affects the human work system used to work in the office to work using a remote work system or more known as Work from Home (WFH). One of online communication media that is often used by TSDSIA is video conferencing with using the Zoom application. Usually, this app will be used if there is an internal meeting between CT team members, all employees TSDSIA, clients, and suppliers. It cannot be denied that with the Zoom application, will make it easier for employees to discuss development of a project and even members the CT team can draw each other to easy explanation of something. Besides that, by using this application, then the participant a meeting can see faces and expressions when speak.

To exchange messages, employees use WhatsApp application. This application is quite frequent used by TSDS employees for describe the progress of work or ask questions related to work. TSDS IA itself has formed one WhatsApp group for all employees define the list of work to be accomplished and update the job if it has to work automatically on line. In addition, each CT team forms a group Whatsapp, which is also followed by principals and seniors' designers. With a group, then the lead designer only needs to describe the development progress via the CT Whatsapp group to prevent it from happening data that is not updated due to the work of the CT team have a relationship with one another. With using the Whatsapp application, then the stage Where can the design review procedure be carried out. To do a review, the user only needs send PDF data which will then be read and reviewed by drawing or crossing out direct. This is quite time-consuming because it has to be a mutual wait and sometimes miscommunication. In contrast to communication or a verbal conversation using Zoom, which speaks directly.

However, there are some drawback to using the Whatsapp application, such as messages or the overwritten file, so it has yet to be reviewed. In addition, because the review only changes form words, it's hard to imagine what that is while saying more lack of experience. It is also quite time-consuming because it has to be read and explain every detail through chat conversations, not verbal discussions. As for

exchanging and storing data, TSDSIA uses Microsoft One Drive. Every employee has an account that provided by the company to store data work, and each such statement can be accessed by TS making it easier to monitor the stages design as well as searching for data if needed in later. Apart from that, Microsoft One drives too used to exchange data only with using a link. Due to employees who work in different places, TSDSIA employees use Microsoft One Drive for sending Sketch Up and Autocad files have a large enough file size. It can say to be efficient and non-efficient because if it works over long distances, then this could be bridge, but if all employees work offline, use of Microsoft One drive will take up quite a long time to upload because need for adequate internet connection.

To work in WFH, you need an internet network is the most crucial component to support running a job. When the internet network goes well, it will help an efficient work process, but if the internet network doesn't go well, it's hard to achieve efficiency. Until now, the internet network enough to be the main obstacle in doing so CT process because it will hinder deliver a message from one point to one point and may even lead to misunderstandings.

B. Offline

Due to the COVID-19 pandemic, that's enough improved, then TSDSIA began to treat a combination work system where several employees have started working in the office. Unlike online, offline work systems do not have limitations in terms of distance and media. Work in the office can be said to facilitate employees to exchange information. It is too due to a supportive work environment CT process between team members. More CT team members make getting information more straightforward, more accessible, and more understandable. To discuss, employees need to turn around and discuss through the laptop, so no data transfer is required quite time-consuming. For data transfer, work systems in offices are also more frequently used USB is compared via Microsoft One Drive. After all, it is considered faster and more efficient because it does not need to use the internet network.

Work Environments

The concept of the TSDS IA office is an open office where each employee has a work desk but there are no walls or partitions to make it easy employees to discuss without moving places. Besides In addition, this area is also equipped with a library of books and materials that are easy for employees to find ideation and make suitable board material without have to move around. While the third floor of the shop is a meeting room and TS private office. This area is often used as a space rest for all employees and meeting rooms for conduct discussions regarding the process of design stages.

Interior Design Process

A. Pre-Design

The design stage at TSDSIA starts with the incoming client and provide a problem to be solved. To start solving a problem, then the designer must know the related data with clients or users in detail. This stage is normal is called the data collection stage, so it is needed further interaction between the client and the representative

from TSDSIA. The TSDSIA Representative is the CT Team that trusted by TS to participate in the project that provided by the client.

Initially, the client will explain regarding details and further information, such as categories or the scale of the project, the extent of the project, the needs, wants, to what problems you want to solve so as not to reoccur. This data can be obtained through interview clients to conduct site visits to locations reconfirm any issues or needs from the client because it is undeniable that sometimes the client can't see the problem that designers often have find. If the location is far enough and difficult to do a site visit, then the client will usually provide photos and videos about the atmosphere of the area and the approximate plan.

After getting an idea of the client's wishes, then the CT Team will try to find ideation and design concept. In this process, one's creativity designers see and designers will try to think creative and critical to find the best solution without removes the aesthetic view. this process later will give birth to a design concept that can in the form of visualization of a collection of various images or any in the form of a sentence to clarify the purpose to be accomplished by the CT Team.

B. Design Development

The design development will be over-mature and more detailed at this stage. The 3D model has shown materials that have been adjusted to the estimated fees provided by the client. 3D model visualization too already visible and ready to be used as a reference depiction of space that shows the atmosphere of space.

This stage is crucial because whatever you want to convey designer should look at the visualization and description and indeed have to pay attention to the aesthetic side to attract client attention. This process also goes through the process of inter-discussion CT Team members to make design decisions the maximum. The lead designer will later be tasked with overseeing the running of a Team CT and ensuring that Team CT members are still on track together to achieve the project's goals.

If the client still feels that something is missing, the CT team, the client, and the TS will return to discussions or brainstorm to review the designs that have been developed. But if the design meets the client's criteria, the design procedure stage will continue at the construction documentation stage.

C. Construction & Development

At the construction documentation stage, the CT Team will work together on working drawings which are essential documents, so that later the contractor can realize the designs that have been made. This stage will enter into a more detailed stage of comparison previously.

The size calculation will be more detailed and detailed. Because the working drawings are done together, the CT team will work accordingly with reference 3D Model approved by the client. So that if suddenly there is a change, the information

will be reported to all members of the CT Team so that the database is the same reference and there are no misunderstandings or data differences.

Broadly speaking, working drawings must be understood by the contractor, who will later build on the given design. To ensure more about the constructs described, then. Lastly, the working drawings will be rechecked by the lead designers and senior designers who have a base education in the field of architecture and civil engineering. If necessary, advice from civil engineering, then later, the CT Team Members will consultation with civil engineers.

In the end, after completing these three Interior Design Process, the results of this interior (building/room) design are called a product.

RESULT & DISCUSSION

Correlation of 4 Components of Creativity in TSDSIA

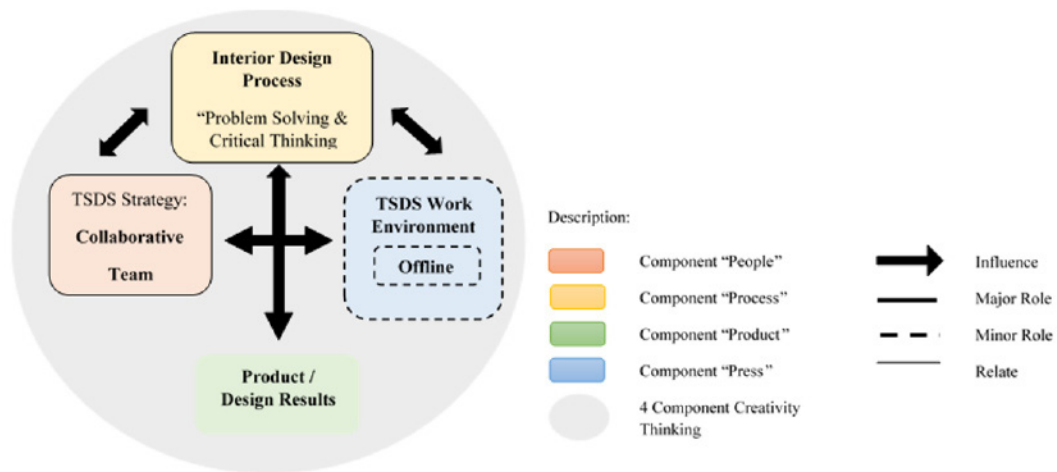


Image 1 The Impact and Role of the Four Components of Creativity in TSDSIA.
 (Source: Nava, 2022)

Based on the analysis and research already conducted (provided in Image 1), these four components (discussed in the literature review - Theory 4P) have different roles and influences in the design creativity efforts in TSDSIA. The author sees that the component that has a significant role in TSDSIA is the “People” component by using the “collaborative team” work system. In contrast to other components, such as “press”, the author sees that these components are not so dominant or have a significant influence. It’s seen when cases of COVID-19 are increasing and causes the entire TSDSIA employees to work using WFH systems or work from home, where collaborative teams and designers have to work from each other’s homes. When this system is not in use, the creative process can still go well even though employees do not work or do not use the facilities provided by the office. Designers can still look for other alternatives to replace the role of the “press” component. One means of replacing these components is with systems and communication

media, whereby collaborative teams can communicate and search for the needed data over the internet. Although online use of communication media has some limitations (internet network), to date, online media has had a significant role in the creative process in TSDS IA.

In conclusion, internet communication applications can also replace the working environment used for discussion. But it is not that the “press” component does not have a role or does not function like other components, but that it can use other alternatives. For example, suppose designers or human resources are facilitated with an adequate work environment. In that case, the creative process will be more straightforward because it is not constrained by space and time, so that the work process will be more productive and efficient.

New Components: System and Media Communications

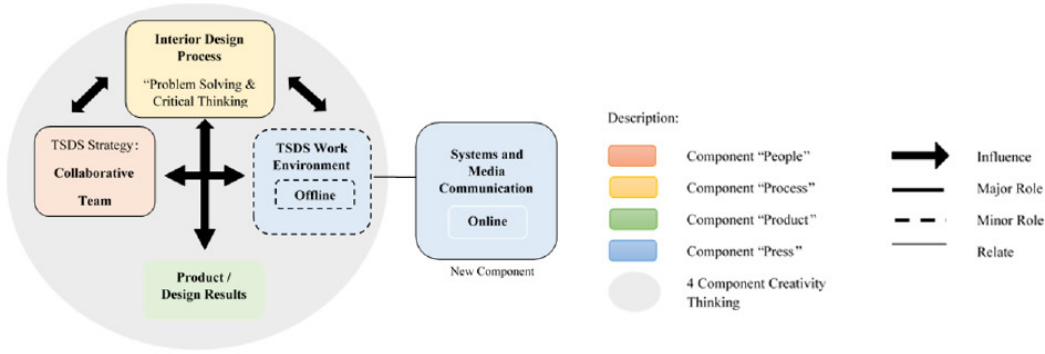


Image 2 New Components Discovered in Design Creativity in TSDSIA.
 (Source: Nava, 2022)

Due to the COVID-19 pandemic and PPKM or *Pemberlakuan Pembatasan Kegiatan Masyarakat*, which is the policy of the Indonesian government since early 2021 to deal with the COVID-19 pandemic in Indonesia, it has become common for TSDSIA employees to Work from Home or WFH so that employees rely enough on the system and communication media.

Thus, the means of online systems and media communication play an essential role in the success of the design process and a collaborative team or even replace the role of the press component (illustrated in Image 2). Communication is the most crucial thing in building relationships between team members.

Communication is a tool for connecting information between team members and will affect a team’s success. If members cannot build relationships, it will eventually affect the development of trust and hinder the growth of effective communication. It is also one factor that makes collaborative team development a failure (phase forming and storming).

With Effective communication, the creative process can work productively because

the entire team member already understands roles, tasks, and responsibilities, so that, in the future, there will be no miscommunication, data, and information insecurity between team members.

To build effective communication between team members, TSDSIA creates creative support programs (such as collaboration days, internal meetings, Design Bull Shitting, etc.) It is also used by online applications such as Zoom (a web conferencing platform used for audio and video conferencing), which makes it easier for team members to discuss, carry out the design stage, build a relationship, exchange data, and diffuse to solve problems in the design phase. In addition, TSDSIA team members also use WhatsApp application (a multiplatform messaging app that lets you make videos and voice calls, send text messages, and more) to help with data and information exchange, using a chat group system that makes it easy for group members to learn about the latest information and prevented an error occurred out of synchronizing data. In addition, it helps the process of exchanging data and information, so the chat group members know the progress of a project and minimize the occurrence of data misunderstanding.

The Impact of Collaborative Team Working Systems as an Effort of Design Creative in TSDSIA.

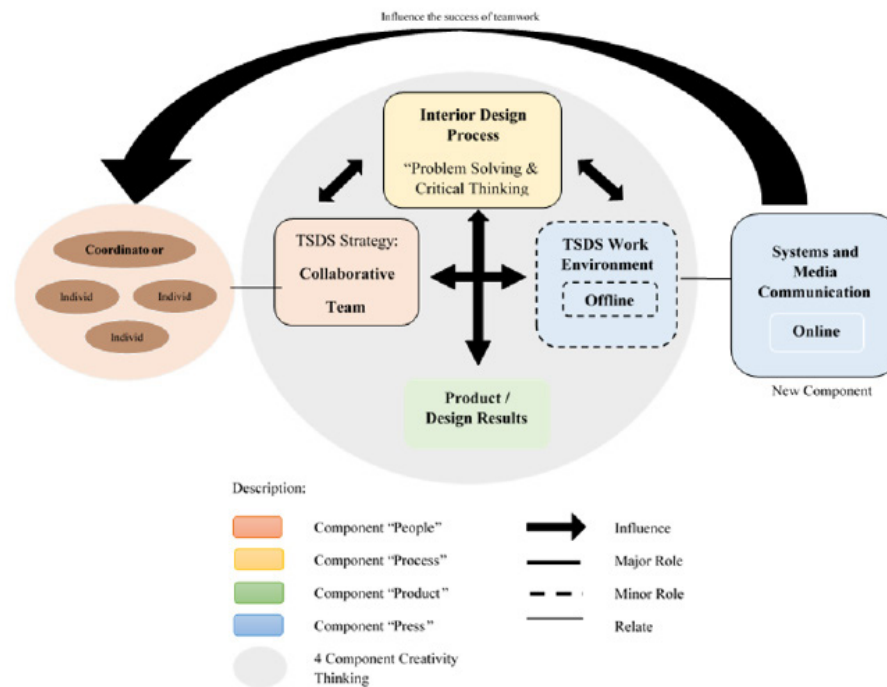


Image 3 Analysis of The Impact of New Components in TSDSIA Collaborative Team.
 (Source: Nava, 2022)

In creating an effective collaborative team, a team must be selectively structured for a team to collaborate productively and efficiently or even to become “team dynamics”. This is important because selecting a team member will affect collaborative team performance in achieving the goal.

TS, as the leader of TSDSIA, has already undertaken steps to establish a collaborative team by bringing together team members who have individual components of creativity through the selection of designers who have capabilities and skills in the architecture - interior design.

"Well-composed teams...have a good mix of members, people who are neither so similar to one another that they duplicate one another's resources nor so different that they are unable to communicate or coordinate well" (Smith,2017).

Furthermore, selecting the person who will be in charge as a team leader is also essential to keeping a team structure. The leader, who can also be called the coordinator, will have a crucial role in collaborative teams, so the chosen coordinator must be able to organize the members and process creativity.

"Each of the unique individuals that comprise a project teams will bring his or her own strength and weakness. Fundamental to any team's success is the leader ability to match personal and assignment" (Smith,2017).

In TSDS IA, TS also provides an opportunity for all designers to grow more on "creativity-relevant skills" by providing creativity support programs (event and activity) so that designers have a provision for creative processes. The author sees that in the presence of a creative support program, TSDS IA demonstrates the importance of a company investing in a piece of knowledge for its entire employees because this will inevitably affect work outcomes. With individuals complemented and possessing components of creativity, TS will later form collaborative teams with members who can participate, understand each other, perform roles and tasks, and work together to achieve common goals. If team member selection is made correctly, TSDSIA will create solid collaborative teams, resulting in large output.

"To build infrastructure that foster collaboration, leaders can support a sense of community through events and activities" (Smith,2017).

Working in groups or teams can be more efficient because the scope of creativity will be so much more numerous and extensive that the entire team members together seek solutions and help each other in making decisions. This is because team members are experts from various fields who will bring unique perspectives into the discussion. So that, in selecting solutions, members will give opinions from the corner of their field and explain in depth. In the process of creating creative ideas, it is pretty advantageous because later ideas or solutions provided have been critically thought out based on diverse expert opinions. Although the procedure will create new conflicts or problems, it will trigger the designer's mindset to be able to imagine the impact of design in the future or the bigger picture. In TSDS IA, the phases are pretty long in reaching the solution selection phase, starting with the individual critical thinking process. Then, the results will be discussed with the

collaborative team members, after which they will pass the screening phase from TS as the leader until the selected solutions are eventually accepted by clients, contractors, and experts/consultants in other fields.

With a few people present, various ideas will be produced. The collaborative team will challenge every team member to give creative ideas. Although there will be only one selected idea later, the other ideas can complement the chosen idea so that creativity results through the process of thinking critically and problem-solving optimally. The undeniable collaboration will also bring forth innovations. From the time side, the work becomes more efficient as the work is done together.

“Diversity of experience and expertise has been proven to lead to more effective decision making and greater innovation in teams because it provides multiple perspectives on the same problem and foster constructive debate prior to decision making” (Smith,2017).

“Greater diversity of people offers more information-broadening the pool of task-relevant information, knowledge, and perspectives available to the team. This in turn increases problem solving, decision quality, creativity and innovation” (Smith,2017).

Last but not least, with collaborative teams having different skills and further education, individuals can broaden knowledge horizons by exchanging science and information because it is undeniable that each individual has limitations. Thus, all individuals or team members will develop and gain broader information or knowledge. This will also affect the design strategy or process that will be carried out on the project. In the end, the author sees that the work system of a “collaborative team” has a major role in the process of producing a product of creativity in TSDS IA. If the formed collaborative team can work, achieving a project’s success will be easy to accomplish because the entire team members can work together independently.

CONCLUSION

The author sees that each component of creativity has different roles and influences. The author sees that each component of creativity has different roles and impact. One of the reasons for the change and discovery of new components is the post-pandemic period that gave major changes to the rest of the world. All people carried out all activities in different homes or places. By WFH or Working from Home, systems and media communications are dominant because these components will affect the design process and communication between collaborative team members. In the absence of good communication.

In addition, the collaborative teamwork system has a significant influence and role compared to other components of creativity. Indeed, for collaborative teams to work optimally, attention, time and experience investments are required, as well as providing several facilities to support the design creativity efforts in TSDSIA. These facilities will certainly affect the design process and results.

The “collaborative teams” working system and other components of design creativity implemented by TSDSIA are already visible in the efforts of design creativity.

From the process and results, we can see that these components positively impact the company, employees, and clients. As an author, my hope of this writing can be inspired the readers or business operators in interior and architectural fields to use this strategy or this work system of “collaborative teams” and other components of creativity in their creative efforts or can also be used in social communities by creating a visible innovation or solving social problems that may occur in the future.

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