

Cisadane Warrior's Character Design: Re-Analyzing the Physical Cues of the Crocodile Demon Queen as a Villain

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ABSTRACT

Character design encompasses the process of creating visually captivating and unforgettable characters for different media platforms. Derived from the user test results of the author's previous project, designing a 360-degree 3D illustration in building an immersive virtual atmosphere of the Cisadane Warrior folktale, this research aims to reexamine the former character design of the Crocodile Demon Queen of the Cisadane Warrior folktale, transforming it into a more refined antagonist. Utilizing a brief design process, it only focuses on reassessing the visual attributes of the characters by using a literature review, a reference, and an existing study, as well as observation methods. The visual attributes include anatomy and facial features of a villain, as well as its culture identity representations. The insights gained from this study help synthesize a proper design brief and execute the character design with improvement and necessary adjustments, so that the character is visually engaging, remains cohesive, and suits better with the intended audience.

Keywords: virtual character, villains, character design, crocodile demon queen

INTRODUCTION

Character design involves the creation and development of visually appealing and memorable characters for various forms of media, such as animation, games, films, books, etc (Coursera, 2023). The purpose of character design is to bring fictional characters to life, conveying their personalities, traits, and roles through their visual appearance. It combines artistic skills, storytelling, and understanding of the intended audience to create characters that are suitable for the viewers, evoke emotions, and enhance the overall interactive narrative experience (Sloan, 2015).

The Dichotomy of Archetypes in Stories

Characters are vital to the story because it is the representation of a story context. Characters in a narrative also help in a better message delivery from a different point of view (Abednego & Kusumawati, 2019), it encourages how the story progresses and ends (Kuntjara & Almanfaluthi, 2021) (Brahman et al., 2021). Likewise, the outcome of a story is the characters, a tale greatly needs its main characters. Noted that not all characters can be the highlight of the story. Characters can be categorized based on their archetypes, seen as the initial representation of a character, quality, or behavior that can enable us to divide them into distinct categories. This can be used to feature characters whose relationships could push an interesting plot, such as the relation between good and evil, which scopes are both represented by archetypes (Tillman, 2012). Aristotle argued that to create a more engaging narrative, main characters should not be inordinately good or bad (Salgaro et al., 2021), although in reality, as cliched as it can be, Joseph Campbell's classic concept of dichotomy characters, a representation of good and evil, an idea of heroes (a figure that is generally perceived as someone that is altruistic and valiant) against villains (an evil and mysterious shadow figure), is still viewed relevant (Tillman, 2012), especially in a heroic folktale or legends, which is commonly segmented to children's literature wherein a disposition of "good" and "evil" is usually used to introduce and identified morality of a certain context much easier due to children's ability to automatically categorize characters from heuristically experiences and observations to define the characters' moral oppositions (Obiols-Suari & Marco-Pallarés, 2021).

It is very natural for a story to offer a main villain character to create an interesting dynamic and heightens the drama (Meng et al., 2020) by becoming the main obstacle that blocks the protagonist's objectives (Sloan, 2015). An evil persona could play a role in engaging the viewers with the protagonist's feelings and lift the hero's stance in the story, for instance, by making the audience despise the antagonist. When a villain purposefully causes the hero's suffering, it gains the same significance in the audience's sense of dread and hatred as the victim does in our sense of compassion (Card, 2011). There are many considerations in creating a

successful villain persona in a story, characteristically and visually, which in some cases, frequently becomes the most memorable figure in many stories (Card, 2011).

Overview of Cisadane Warrior's Villain

The Cisadane Warrior is one of the Indonesian local warrior folktales originating from Tangerang. The protagonist of this tale is a warrior by the name of Surya, who was born in Rawa Kidang, Sukadiri District, in the 1930s, reputed to possess martial arts skills, employed to repel the invaders and defend the region around the Cisadane River, and well-known to his service in defending the banks of the Cisadane river against the Crocodile Demon Queen (Khan, n.d.). The Crocodile Demon Queen in this piece, although there is no clear depiction of the characteristics nor the background, is circumstantially introduced as the shadow character (villain, enemy, or antagonist).

In this case, the common perception of The Crocodile Demon Queen to be evil is considered reasonable due to its threatening existence to the Cisadane River's residents' well-being. Classifying The Crocodile Demon Queen as the shadow character exists because of the public social stereotype. Stereotypes are usually related to 'default information', correlated with social groups, classes, backgrounds, and occupations (Lebowitz, 1984). The past study reflected that the term 'evil' is perceived to be 'dangerous' as it potentially implies connections to something supernatural and inhuman. However, keep in mind that evil and wrongdoing possess distinct essential characteristics to varying degrees. Evil actions bring about significant harm to a victim and are motivated by the intention to cause, permit, or witness such harm for an objective that fails to consider a person's humanity or breaks morals that are socially acceptable to some degree (Calder, 2013).

Previous Cisadane Warrior's Virtual Heritage project finding

The final work was conducted by using interview and observation methods and tested on children aged 6-11 years old. It indicated that although the overall visuals are deemed enjoyable, the intended highlights of the virtual illustration, the main characters, were lacking in gaining the audience's attention and interest.

Interviewed audiences commented that the designs were acceptable, yet didn't give a satisfactory and impactful impression, due to its prevalent design as well as lack of innovation and uniqueness, especially the Crocodile Demon Queen, the antagonist character which the story revolves around.

Research Questions

This paper will reemphasize the function and purpose of the characters in a visual story that fell short in the previous project, the creation of Cisadane Warrior as a Virtual Heritage using 3D Illustration. It focuses on refining the character design using a different approach: a character design brief process (Anderson et al., 2019). Although this design process includes the finalization of the design brief and the character design's execution, this paper focuses only on reanalyzing one of the present character designs' visual features, the Crocodile Demon Queen as a villain. This design process starts by determining the aim of the character design, the medium of the project, the target audience, the desired tone, the story that the character is featuring, and the marketability requirements. This research exclude the marketability requirements as it is not considered necessary for the development of this project. Therefore, the first research question is:

1. What is the aim, medium, audience, desired tone, and story of the Crocodile Demon Queen character design?

Virtual Heritage is an emerging field that focuses on digitally reconstructing archaeological and historical information into three-dimensional (3D) objects, ranging from individual works to entire cultural landscapes (Vu et al., 2018). With that in mind, this study will refer to character design that aims to be executed in 3D and used virtually. The author reexamined the Crocodile Demon Queen character design by using Sloan's book: "Virtual Character Design for Games and Interactive Media", which encompasses core concepts of creating virtual characters in three parts: the presentation of virtual characters theory, the performance of virtual characters theory, and the virtual character design practices samples (Sloan, 2015). This research omits the second and third parts, as this paper's objective is to reanalyze the Crocodile Demon Queen character physique for future development.

The information derived from the first question is then used in this step of the design process, thus the following research question is:

2. What are the physical cues which represent the Crocodile Demon Queen as a villain that can be used in constructing the final design brief?

These insights provide the opportunity to enhance the aesthetic quality of the character, potentially making it resonate better with the intended audience. Future papers will initiate research regarding how to instill a character's emotions and personal to bring a character to life, create a proper character design brief, and develop a more distinguished, established, and improved shadow character.

RESEARCH METHOD

The methods used in this paper to analyze the existing Crocodile Demon Queen character design are a literature study, an existing and reference study, as well as an observation approach. The literature study is based on Sloan's theory (Sloan, 2015) and findings from past studies, while the observation is conducted by reexamining the Crocodile Demon Queen character design based on the research questions. In addition, an existing and reference study is employed on virtual villain character's design by several skilled artists.

RESULT AND DISCUSSION

The Aim of the Character Design

The aim of the character design needs to cover essential points of a certain context and take into account the deliverables, known as tangible artworks (Anderson et al., 2019). The context focuses on how the Crocodile Demon Queen will be presented, which is as a powerful mystically creature, yet is visually incarnated in human form to give a more relatable and less ambiguous look.

The Medium

Medium is an entertainment media, such as animation, illustration, and games, which have their technical requirements (Anderson et al., 2019). The character is used in an immersive 360-degree 3D Illustration to develop it into an interactive game, therefore technical functionality and how their animation cycle movement will be points that need to be considered.

The Target Audience

The biggest concern in targeting an audience is age, as different audiences will respond to different design styles. This project's target audience is children aged six to eleven. Younger audiences tend to like slightly older characters, as it could become their aspiration (Anderson et al., 2019). Therefore, the author choose to represent the Crocodile Demon Queen as a young adult female, to win the younger audience's favor, especially young girls, which proved commonly interested in the Crocodile Demon Queen in the preceding user test.

The Desired Tone

The tone or theme of the story set limits to the design choices and stylization. It is also influenced by the target audience. Designing characters for children is more tricky as their guardians (particularly parents) are the gatekeepers of whatever the children can engage with (Anderson et al., 2019). The Cisadane Warrior folktale can be interpreted as a dark story, due to its supernatural aspects, but that can be tackled by changing the mood of the story so that it is less frightening, yet still exciting and intense. It can be applied to the character's key color, where relatively bright color choices are suggested for younger audiences, as well as the character's shapes or forms, and postures. The shapes and postures of the character design meant for children tend to be rounder and more open, yet it is debatable as the main objective of shapes and postures is to put forward the different archetypes of certain personas. Using the same shapes and postures will erase the distinguished evil archetype features.

The Story in which the Character Features

The story is the most important aspect of a character design, where characters' personalities are derived from their goals, desires, and conflicts (Anderson et al., 2019). Constructing a character biography is suggested, which includes in-depth questions such as:

1. Who/what are they?
2. Where are they from?
3. What do they like and dislike?
4. What age are they?
5. What do they want more than anything?
6. What are the stories this character features in?
7. What are their flaws and virtues?

In this case, although the Crocodile Demon Queen's back story isn't well-known, her role as a ruler of the crocodile in the Cisadane River can be imagined and constructed in accordance with the main story. Based on the questions provided, the author concludes that the Crocodile Demon Queen is a supernatural crocodile demon that led the crocodiles in the Cisadane River for generations. She is a wise ruler to her subjects yet lacks sympathy towards humans. This antagonist is meant to embody the cunning and ruthlessness of a seasoned predator with a commanding presence.

Character Design Analysis

The current design of the Crocodile Demon Queen (Figure 1) is depicted as a devious ruler of the Cisadane River, has many crocodile followers, and is a menace to the Cisadane villagers. In contrast with the protagonist, the heroic and humble Cisadane Warrior, the Crocodile Demon Queen is characterized as someone who is self-willed and wicked. Visually, the Crocodile Demon Queen anatomically looked proportionally like a beautiful woman yet scaled like a crocodile and has a crocodile tail as its distinguished physical appearance. She wears a robe, inspired by Betawi's traditional dress called Kebaya Encim. The green color was chosen because it symbolizes nature and is commonly used to picture crocodiles in works.



Figure 1. The design of the Crocodile Demon Queen's front (left), side (middle), and back (right) views.
source: author's documentation

Analysis of the Crocodile Demon Queen's Physical Cues

Sloan stated that visual style comes before any elements in examining a character's appearance. Unique styles greatly influence how characters are presented, whether developers create their style or adhere to an established one. The application of style has a great impact on character appearance, as well as the audience's perception and interpretation. Thus, it is logical to start by considering artistic and visual design principles when discussing virtual character appearance, by understanding nature in creating compelling character art, regardless of the style, be it realistic, stylized, or abstract (Sloan, 2015).

Anatomy Features of a Villain

Character design literature emphasizes the importance of referencing human structure and movement when developing character concepts, determined by their portrayals including attraction, health, and age (Sloan, 2015). The author uses this concept as a guideline to analyze the body physical traits of the current Crocodile Demon Queen's character design, which the author vision as a woman that incorporates a human-like body with an imposing height and a graceful yet

powerful build that remained untouched by the passage of time, eternally preserving her youthful young adult vigor.

The outset of this research is by examining the anatomy. Anatomy, which includes body proportion and type, is the foundation of character creation. Although there is no substantiated connection between body type and personal traits, viewers often ascribe the characters' traits from their observations of the characters' figures, hence the importance of anatomy as the depiction of a persona. Sloan elaborates that an ideal character's overall height proportion is typically around eight head height. It may be closer to seven and a half head heights for adults. The eight-head height principle still applies regardless of gender differences in average height. Age influences the head-to-height ratio: younger teenagers are about seven head in height, older children around six, younger children around five, and infants around four. Using the head unit, the proportions of the torso, arms, and legs can be analyzed. This helps determine if a virtual character's anatomy aligns with nature or if it's overemphasized for effect (Sloan, 2015). The current Crocodile Demon Queen's anatomy used a seven-head height ratio, which Sloan labeled as an adolescent height, which is not aligned with the idea where the Crocodile Demon Queen is pictured as a young adult woman (Figure 2).



Figure 2. The seven-head height of the Crocodile Demon Queen.
source: author's documentation

Although, as fictional as it can be, the author wants to emphasize the anatomy of the Crocodile Demon Queen as dramatic and as representable as it can be as a sinister, arrogant, and intimidating villain. This is in line with the preceding study that suggested putting in mind the villain's personality to determine adding exaggerated proportions to its profile and postures (Anderson et al., 2019). For that reason, to determine the most suitable body proportion of a villain, the author also adopts the theory of body type. Sloan introduced the somatotype categories, a three body types classification that is literary used to determine the body shape of a character, linked to their health conditions, such as Ectomorphs, which possess a slender physique, characterized by a light build, taller body, leaned muscle tone, small bones, and elongated limbs; Mesomorphs, that have a more sturdy physique, characterized by larger bones, natural athletic build, well-defined and substantial muscles, and finite body fat; as well as Endomorphs, who own a greater ratio of body fat to muscle than the other two categories, tend to have a shorter stature, rounder physique, broader build, and strong limbs. According to Sloan, this classification theory cannot be rigidly applied. It is important to remember that not all humans, therefore virtual characters, can be neatly categorized this way. It is common for characters to exhibit a combination of two categories, particularly a blend of ectomorph and mesomorph or endomorph and mesomorph. However, in designing a character, the targeted audience's preconceptions regarding body types are worth considering (Sloan, 2015).

Based on an existing study of villain characters, to create an ancient paranormal intimidating persona, a tall and elongated silhouette is commonly proposed (Anderson et al., 2019). In addition, the author also considers the 'authority aspect' of the Crocodile Demon Queen character, a supernatural deity and a powerful leader among the crocodiles (classified as one of the biggest reptiles in the world) in Cisadane River. Thus, it is fitting to employ the combination of ectomorphs and mesomorph body types to show more dominance's aspect in her looks, supported by past studies that associated Ectomorphs with agility and flexibility due to their minim body weight, paired with a mesomorph body type that signifies physical capability and strength. In conjunction with other design elements, this combination proposes shiftiness, introversion, intensity, and cunning traits from

the ectomorph, while also suggesting traits like dominance, assertiveness, and competitiveness from the mesomorph (Sloan, 2015).

Facial Features of a Villain

The author also wants to put forward the idea of the Crocodile Demon Queen as a visually striking and attractive young woman. A visual cue of attraction is undeniably affected by biological factors, which other than the body, is the facial design. Observers of any gender and with diverse sexual preferences tend to find feminine features appealing, indicating that feminine characteristics are widely perceived as attractive. Consequently, highly feminine facial shapes are commonly considered the archetype of beauty (Sloan, 2015). Yet, the author acknowledges that in addition to beauty, the character of the Crocodile Demon Queen must also possess indications of haughty, smart, conniving, and crocodile-animal-like traits, thus pushing the author to deepen the understanding of an antagonist's facial attributes. While physical attractiveness does not have a clear-cut connection to a 'good-evil personality', facial features are among the significant physical attributes that play a role in distinguishing them (Obiols-Suari & Marco-Pallarés, 2021). One that is popularly used to demonstrate evil is abnormal dermatologic features. Irregular dermatologic depictions, such as scars, marks or wrinkles, warts, tattoos, odd-looking facial birthmarks, darkened skin around the eyes, swollen nose, baldness, and albinism, are commonly used to illustrate evil because it is regarded as flaws that symbolize unfavorable attributes of malevolence, wickedness, or being evil (Marion et al., 2018), as well as evoking unfamiliarity and distress in the audience by serving as tangible representations of the character's inner corruption (Croley et al., 2017). Abnormal facial features are already used in the present Crocodile Demon Queen design, including piercing reptilian eyes, a hint of scaly crocodile skin above and below her eyes, and sharp teeth (Figure 3).

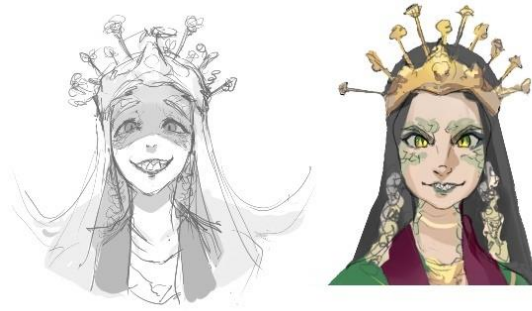


Figure 3. The Crocodile Demon Queen character's facial attributes.
source: author's documentation

The author noticed that these facial features could be improved by further experimenting with the shape of the face, eyebrows, and mouth, as well as the skin pigment (Obiols-Suari & Marco-Pallarés, 2021) (Anderson et al., 2019). Two antagonist character designs is used to emphasize the use of triangular and sharp shapes in defining an evil-like profile due to its expressive potential. The author observed the references and found that the triangular shape possesses qualities of strength, stability, and dynamism. When incorporated into facial features, such as the jawline or eyebrows, triangular shapes can convey a sense of power, resilience, and determination. Triangular shapes can be effectively utilized as sharp-pointed teeth or an angular nose, visually communicate hostility or danger. Incorporating triangular elements into a character's facial features can amplify their villainous or confrontational qualities, making them more threatening and hostile. While triangles can be powerful and visually appealing, it is crucial to balance them with other shapes in character design. Combining triangular features with softer, rounded elements can create a balance in a character's appearance (Figure 4).

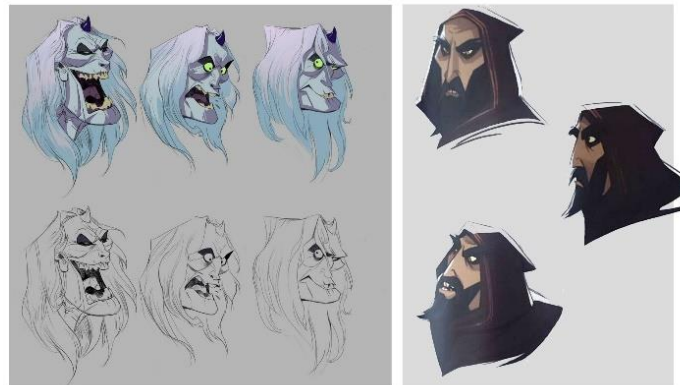


Figure 4. Villains' face features designed by Devon Cady-Lee (left) and Hollie Mengert (right).

Source: Anderson, et al. (2019)

The references also show the use of muted color for their skin, indicating an unusual skin color, which conditions can be determined by environment and genetics (Sloan, 2015). Past research shows that irregular dermatologic attributes related to skin color, pallor for instance, were usually used to signify evil (Marion et al., 2018). Research has demonstrated that a more saturated and slight increase in skin redness is generally pictured as a normal and healthy individual (Sloan, 2015), therefore a cooler color symbolizes the character's unusual habits and lifestyle, a more introverted one for example, or likes to live in a cave and other sun-barren spaces (Anderson et al., 2019). When it comes to the Crocodile Demon Queen's genetics, the reptilian color scheme can also be considered, which color palette won't stray far from greenish or blueish tones.

Personality Perception

Considering the nature of the Crocodile Demon Queen depicted in records, articles, and documents in The Cisadane Warrior folktales, and despite the lack of explicit details about her characteristics or background, she is indirectly portrayed as the shadow figure, embodying the antagonistic role of the story. The personalities of a character are essential in shaping how visually a character is perceived, therefore to strengthen the Crocodile Demon Queen character visual development, the author decided to use the Big Five Model (extraversion, emotional stability, agreeableness, conscientiousness, and openness) and the outfit factors namely

type, design, and color, deemed as parameters in determining personality traits in previous psychological studies (Cheng & Wang, 2024). Originating from the purpose of the project, the author highlights the Crocodile Demon Queen's personality as seen in Table 1.

No	Trait	High	Low
1	Extraversion	Assertive	Solitary, Reserved
2	Emotional Stability	Confident	-
3	Agreeableness	-	Malicious, Critical
4	Conscientiousness	Controlled, Dependable, Self- Disciplined	-
5	Openness	-	Conventional

Table 1. The Crocodile Demon Queen personality
source: author's documentation

Based on the Big Five personality analysis, it is concluded that the Crocodile Demon Queen is an introverted, charismatic, mature, and conservative character, which based on the past study results, tends to be depicted using cool, darker, and low-saturated colors, with a more reserved and professional outfit type and design (Cheng & Wang, 2024). These aspects have already been applied in the current design of the Crocodile Demon Queen. The present design employed long sleeves, tailored cuts, and structured garments to emphasize her conservative traits and composed nature, while her charisma is expressed through refined details in her appearance with subtle but striking features, such as regal accessories, color accents, or small details in her attire to exhibit her social standing and cultural representation. Yet, future design should reflect more on her reserved nature by using darker, cool-toned colors to evoke a sense of mystery and sophistication, aligning with her mature and serious demeanor. Although the color choice is still debatable as it is vital to also consider the target audience's color preferences which tend to be more saturated and vibrant (Xu et al., 2022).

Identity Representation

It is crucial to acknowledge that identity cannot be easily expressed or measured by numbers and, from a sociological perspective, cannot be taken away. It is not as simple as tagging or marking a specific individual, but a dynamic self-identification process through which individuals comprehend themselves in relation to others. Over time, our sense of identity can and will evolve, depending on various factors including society and culture, politics, as well as biology and environment. In addition to creating a virtual character, designers need to keep in mind how certain groups are represented. Examples of self-identity representation are ethnicity and nationality, the most complex and deeply various personal aspects that transpire from the cultural heritage and geography of someone. Given that many virtual stories are based on fiction and fantasies, it is intriguing to examine the fictive characters' possible cultural symbolism. Nevertheless, careful consideration needs to take place as improper handling has the potential to offend certain groups due to perceived as demonstrating ignorance (Sloan, 2015). Ethnicity representations can be pictured in a virtual character's costume. In this section, the author discusses the Crocodile Demon Queen's ethnicity by exploring her clothing and accessories.

The Cisadane Warrior folktale origins from Tangerang, thus deducing the Crocodile Demon Queen's ethnicity as Betawis-Indonesian. Betawi people are well-known for their diverse cultures, which is also reflected in their attires (Wirawan & Sutami, 2022). The first design of the Crocodile Demon Queen uses Betawi's traditional woman dress called Kebaya Encim, a traditional Indonesian attire that originated in the 19th century during the colonial period (Figure 5).



Figure 5. The Crocodile Demon Queen's dress and accessories.
source: author's documentation

It is suited to the Crocodile Demon Queen's social status, the highest ruler of the Cisadane River, due to its philosophical meaning of elegance, honor, and maturity. Visually, Kebaya Encim represents a symbol of cultural integration and the interplay between indigenous traditions, Chinese essence and colonial aesthetics, not only exemplifying the beauty of Indonesian fashion heritage but also representing a complex historical narrative of cross-cultural exchange and identity. Each part of the traditional dress has its own symbolic essence and value system with important meanings for its users, shown by the color, shape, decoration, and cues contained in the traditional clothes. However, it can be seen that the current character's costume is rather plain and has no uniqueness to it. Based on literature studies and observation, the author found that Kebaya Encim has some characterized elegant designs such as delicate embroidery, intricate lacework, and ornate details showcase the craftsmanship and attention to detail on a fitted, embroidered blouse worn with a batik sarong, reflects a fusion of Indonesian and European influences, combining elements from both cultures (Wirawan & Sutami, 2022).

CONCLUSION

Physical features are a form of representation in designing a character, especially in the creation of a shadow character. The findings of this paper point out several considerations in the creation of an upgraded villain's visual design, namely the Crocodile Demon Queen in the Cisadane Warrior folktale. Initially, the author uses the brief design process to find key points used to determine the criteria for the best representation of the Crocodile Demon Queen, which is then used in the analysis stage. In this stage, deciding the body proportions and type of a character is essential as it can illustrate a character's age, role, behavior, and capabilities, as well as maintain its silhouette, emphasizing the recognizable anatomical features. Facial features also play a significant part in strengthening the character's evil dispositions, including facial shape, enhanced by detailed irregular dermatologic traits based on the character's genetic inheritance, health conditions, or environment. In addition to creating a distinguished character, costume design should be highlighted as an element that could portray a character's personality, origins, and cultural identity.

The results of this paper can be used in the next phase of the following research concerning how to instill a character's emotions and persona in a virtual character, supplementing future formulation of an appropriate design brief and the development of the Crocodile Demon Queen of the Cisadane Warrior folktale in the enhanced Virtual Reality project, to ensure that the character aligns more effectively with the target audience. The author also suggests elaborating on the correlation of the preferable media and character design 3D execution during the design process as different mediums have their own set of restrictions, which in this case Virtual Reality 3D Illustration.

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