

# Employee Skill Requirements for Various Game Development Jobs

**W**HAT DO YOU DO after you read the written directions and still do not understand what you are supposed to do? This situation can happen often. To avoid this possible situation, readers can implement reading strategies. These strategies can take place before, during, and after reading the written directions.



## Objective:



Identify the common traits, skills, and education needed to become a successful game developer.

## Key Terms:



game designer  
game genres

game programmer  
methodology

skill  
trait

## Game Development: Common Traits and Skills

When you are looking for a job, it is important to determine what skills and traits are needed for the position. These skills and traits differ for every job. Some may require technical skills, and others may require sufficient writing skills. What is required for a successful video game developer?

## TRAITS AND SKILLS

A **trait** is a characteristic of a person's personality. A **skill** is the ability to do something well. For instance, a trait of a successful student is being driven. A student wants to do well in school and studies for two hours a day. An example of a skill for a successful student is the ability to study well. Having good study skills is important.

## Passion for Gaming

A passion for gaming involves knowledge and enjoyment of game play. As a gaming professional, you do not have to be a hard-core gamer, but you must enjoy playing video games. You need to have knowledge of consoles and should have knowledge of the gaming market. For example, you should know which

games are on the market. More specifically, you should know which games are selling well in the market. As a gaming professional, you certainly do not want to create a type of game that is not selling well. So you should have knowledge of **game genres** (categories of game types based on the game play) used in the game, such as an action game or a role-playing game.



**FIGURE 1.** The expressions on these young boys illustrate their passion for gaming. Both boys are extremely focused and determined to win. Video game developers need passion.

## Enthusiasm

A key to success in any job—especially in gaming development—is enthusiasm. Employees in game development should have a positive attitude, a willingness to defend their ideas, a desire to do the job, and self-motivation. All of these traits center on a key ingredient to creating a successful video game: enthusiasm.

## Dedication to Life-Long Learning

Game development employees should be dedicated to technology and its advances. They should have an interest and ability with languages. In addition, game development employees should be devoted to increasing knowledge of game development methodologies. A **methodology** is a system of accepted practices and procedures used to accomplish a task. As technology changes and better ways to accomplish a given task are developed, methodologies change.

## Ability to Work with Others

A project team is typically made up of people from several disciplines. People within these disciplines often have distinct



**FIGURE 2.** The ability to work with others in the video gaming industry is extremely important. This image shows what a typical programming meeting might look like. Team members are around a table with their technology while discussing the current topic.

personality traits. For example, an artist creates a character for the game and may view that character as an extension of himself or herself. Programmers are likely to view the character as simply a game asset and as nothing particularly personal or creative. Should the programming team or the design team require the character to be modified, the artist may take offense that a request is being made to change his or her work. However, egos must be set aside for the good of the project.

Many game companies believe that conflict is a productive way to generate great ideas and game features. Project team members must be able to engage in conflict without assaulting a member of the team on a personal level. Also, team members must be professional and should avoid taking constructive criticism as a personal attack.

## Well-Rounded Education and Interest

As a designer, you work on different game types. One example is an educational game designed to teach middle-school students how the heart works. The designer would need a solid understanding of how the heart works to achieve a sense of reality in the final game product. People on the project team must be willing to learn about many topics. Taking a variety of classes in high school and college and having a broad range of hobbies and interests is useful to all gaming professionals.

## Professionalism

**Professionalism** is the methods of a person in a certain industry and can include effective written and verbal communication skills. Gaming professionals must be willing and able to communicate regularly with the development team. Game success depends on team members sharing ideas, giving, receiving constructive criticism, and checking the task status. Time management, organization, and problem-solving skills are necessary traits for all gaming professionals.



**FIGURE 3.** The following image illustrates team members using professionalism during a meeting. They respect various opinions, despite whether they agree or disagree.

## EDUCATION AND SPECIFIC SKILL REQUIREMENTS

Education is a major component of jobs. When applying for jobs, the education level needed to be qualified for the position will be clearly stated. You may need a high school diploma, a bachelor's degree, or a master's degree. Also, you need to be aware of specific skill

requirements that will be needed for your potential job. Specifically for a video game developer, education and certain skills are necessary.

## GAMING PROFESSIONAL JOBS AND PROFESSIONAL SKILL REQUIREMENTS

The skill requirements for a game developer can vary depending on the area of interest. Some require a bachelor's degree, and others may just require an associate's degree. As the jobs become more complex and the difficulty level continues to rise, more education is needed.

### Writer

The education needed to become a video game writer is a bachelor's degree in journalism, English, or communication. The skills required include a great knowledge of an industry or a specific topic. For instance, when a writer is primarily writing for a company that develops games for preschoolers, the writer should be knowledgeable on how preschoolers play and learn.

### Game Designer

The education needed for a game designer is a bachelor's degree in game design or programming. A person rarely begins a career in gaming as a game designer. This role is typically reserved for seasoned game programmers, artists, or sound designers who have worked on many successful projects. The skills needed include experience on several game projects, critical-thinking skills, problem-solving skills, and programming skills. A **game designer** is a person who must have a good understanding of graphics for gaming, computer hardware, and consoles. He or she must understand operating systems, too.

Some programming experience is necessary to become a game designer. The experience should include creative vision and design skills with game levels, characters, vehicles, and user



## FURTHER EXPLORATION...

### ONLINE CONNECTION: How to Become a Video Game Developer

Do you have what it takes to become a video game developer? The following link, <http://www.academicinvest.com/engineering-careers/software-engineering-careers/how-to-become-a-video-game-developer>, provides information on what it takes to become a successful video game developer. The article gives a list of traits needed in this profession. After looking at the list, what traits do you have? Write them down. The article includes soft and hard skills needed. What is the difference between the two skills? Read about it. Then write a short summary. After reading the entire article, answer the question at the beginning: Do you have what it takes to become a video game developer?

interface. You must have the ability to create development documents, including game progression flow charts, concept documents, design documents, user interface navigation flow charts, and functional specification documents. As a game designer, you need to have the ability to create game music and dialog tracks, such as composing music and dialog, editing music and dialog, mixing music and dialog, and implementing music and dialog.

## Game Programmer

A game programmer needs a bachelor's degree in computer science or a related major or gaming with a minor in psychology. Skills needed include an efficiency in using and reading programming languages (e.g., C + +, Visual Basic, and Java). A **game programmer** is a person who must have a broad understanding of computer technology, such as graphics, operating systems, computer hardware and platforms, and gaming consoles. A familiarity with game engines, including mathematics and physics, is essential. Problem-solving skills needed include debugging code, troubleshooting, and testing logic problems.



**FIGURE 4.** A video game programmer may use multiple computer screens while working to view multiple parts of the game.

## Game Producer

Education needed to be a game producer is a bachelor's degree in business management or marketing. A game producer needs sufficient project management skills, such as the ability to set timelines, track and report progress, manage and lead people individually, and manage and lead project teams. He or she needs a broad and in-depth understanding of the gaming industry.

## Sound Designer

Education needed for a sound designer is an associate's degree or a bachelor's degree in music or audio production. Skills needed include an understanding of audio engineering principles. It is wise for a sound designer to play one or more instruments and to have the ability to use computer software tools. A sound designer creates game music and dialog tracks. Responsibilities include the following: composing music and dialog, editing music and dialog, mixing music and dialog, and implementing music and dialog.

## Animator

To become an animator, an associate's degree or bachelor's degree in art or animation is needed. An animator needs well-rounded artistic skills that include the ability to sketch and draw and a talent in diverse media (e.g., clay and textiles). Effective use of computer software (e.g., Photoshop, Illustrator, and programs for 3D graphic development) is necessary. An animator needs to fully understand anatomy and emotional expressions. He or she also needs the ability to create and read storyboards, understand basic animation principles, and be proficient in 2D and 3D software animation products.

## Game Tester

A game tester is an entry-level position that requires no college coursework. Additional training and education will be necessary when a game tester hopes to advance his or her career and move into a different role in game development. Skills required include a basic understanding of game terminology and the ability to multitask. A game tester must have good attention to detail, the ability to play a single level or area of a game for extended periods of time repeatedly, and excellent documentation skills.

## Summary:



A variety of education degrees are needed to succeed in the video game programmer industry. A video game writer needs a bachelor's degree in Journalism, English, or communication. A bachelor's degree is also recommended for a programmer and designer. Those interested in that area can obtain the bachelor's degree in computer science or gaming. A sound designer needs an associate's degree or bachelor's degree. An animator needs the same education as a sound designer. A game tester just needs a high school diploma. Characteristics needed to enter this field of work include being passionate, well-rounded, professional, dedicated, flexible, and enthusiastic. All of these educational and skill requirements are necessary when becoming a video game professional.

## Checking Your Knowledge:



1. What is the definition of a skill?
2. What is the definition of a trait?
3. List three traits needed to become a video game professional.
4. What is the education needed to become a sound designer?
5. To become an animator, what computer skills are necessary?

## Expanding Your Knowledge:

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Think of your favorite video game. It can be one from the past or a current one. Research the company that made it. Write down five facts you learned about that company. Make a list of those facts, and report back to your class. Facts could include names of the programmers, how successful sales are, similar video games, etc.

## Web Links:

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### Game Designer

<http://www.schools.com/visuals/how-to-become-a-game-designer.html>

### Game Developer Salary

<http://www.shacknews.com/article/85443/what-do-game-developers-make-in-salary>

### Video Game Developer Jobs

<http://www.careerbuilder.com/jobs/keyword/video-game-developer>