

An International Study on Learning and Process Choices in the Global Game Jam

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ABSTRACT

This paper reports the results of an online survey done by Global Game Jam (GGJ) participants in January 2012. This is an expansion of an earlier survey of a local game jam event and seeks to validate and extend previous studies. The objectives of this survey were collecting demographic information about the GGJ participants, understanding their motivations, studying the effectiveness of GGJ as a learning and community-building experience, and understanding the process used by GGJ participants to make a computer game in extremely limited time. The survey was done in two phases: pre-jam and post-jam. Collectively, the information in this survey can be used to (1) plan different learning experiences, (2) revise the development process for professional and academic projects, and (3) provide additional elements to game jams or change their structures based on the participants' comments to make them more fruitful.

Keywords: Collaboration, Community, Design, Game Development, Game Development Process, Global Game Jam (GGJ), Learning

INTRODUCTION

The Global Game Jam (GGJ) is the world's largest game development event (also known as a game jam). GGJs are organized by a central organizing committee and local organizers in more than 40 countries and 200 sites (Global Game Jam Sets Guinness World Record™ for being the Largest Game Jam in the World, 2012).

Taking place at various sites (mainly educational institutions) throughout the world, this event is a 48-hour period (the last weekend of January) that brings together thousands of game enthusiasts (students, industry employees, and others interested in game development) with different skills to make games with a common theme and some optional diversifiers (GGJ Wiki, 2009). As spectators, participants and organizers we

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have long been interested in the learning opportunity that the GGJ represents, a corollary of a pedagogic awareness of the considerable benefit of applied and practical learning experiences. Piaget (1970) in particular advocated the importance of learning through experience. Through applied learning experiences there are opportunities for learners to develop through the practice of their skills and understandings, either learn in both tangible and intangible environments. While the focus of Piaget's (1970) work was primarily focused on the four different stages of cognitive development of young learners, a later theorist, Csikszentmihalyi, (1990) has concentrated on "stage independent" aspects of Piaget's theory, which appear to be relevant to all learners. Csikszentmihalyi (1990) developed the flow theory of optimal experience, which derives its name from the experience that people feel when they act with total involvement. This has close links to the learning process by suggesting an optimal, enjoyable, and immersive learning environment as Chan and Ahern (1999, p. 152) say: "At its most basic, flow is simply a description of people enjoying themselves. They are in a state of enjoyment because they have situated themselves in an optimal environment. Kiili (2005) states that this state is relevant for learning. This should strike a resonate chord for any instructional designer. The goal of any instruction is to help students acquire the requisite knowledge or skill under optimal conditions.

The GGJ is a highly engaging process with extreme time constraints, and attendees possess a wide range of skills and backgrounds; through it participants may learn applied and potentially transferable skills that may be similar, comparable or possibly better than the skills learnt in a formal education environment. This is particularly noteworthy considering the unique circumstance at which GGJ runs, i.e. extreme timing constraints that require an exceptionally efficient development process. This means that participants not only can learn and practice game development skills but also they need to discover and potentially invent development processes suitable for timing constraints (an outcome

of their participation that can even be helpful and educational for observers in order to find more efficient methods for time-constrained development projects).

While GGJ has been around since 2009 (History & Contributors, 2012), there has not been much research on different aspects of this global event. Some recent examples include Musil et al., (2010) and Shin et al., (2012). It is our belief that the GGJ represents a significant learning opportunity and studying this event and the participants not only provides insight on the educational aspects but also can reveal valuable information on participants as the next generation of game developers, and their skills and interests. The study presented in this paper is based on a survey of the GGJ 2012 participants. The survey included a broad range of questions - from general demographic to learning and development aspects. For the learning process, we considered general skills and practices involved in game development, such as programming and artistic content development, and also the skills, methods and approaches unique to the GGJ. On the other hand, the participants go through the design and development process within a strictly-limited time and theme constraints that are not common to typical educational tasks in formal institutions where most GGJ participants are trained. The time constraints mean that participants not only need to learn and use specific skills, but also they have to learn how to apply their skills in a timely manner - a particular "learning" task which may not happen in typical educational experiences but can have a clear effect on their performance once in industry. The specific research questions are:

- Research Question 1:** What learning occurs as a result of the Global Game Jam? This includes learning specific skills and also understanding the process and can be broken down into the following sub-questions:
- **1-1:** What skills (if any at all) are or can be learned during the GGJ?
 - **1-2:** How much learning takes place during the GGJ?

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