The Development of a Multiplayer Game for Education of Hospital Management

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Abstract and Objective

This paper designed and prototyped a networked hospital management serious game for education, and evaluated the prototype. A player, the president of each hospital, makes management decisions under various clinical indicators, and the decision affects condition of the other hospitals as well as of his/her own. The interaction makes the players compete, and, at the same time, exchange their findings each other.

Keywords: Hospital Management, Sirius Game, and Multi-play

Introduction

Recently, the serious game concept seems fitting well for the demand of the medical management education, a game environment implementing various parameters of hospitals may provide tactful environment to experience management and to horn the required skills. Additionally, recent advancement of the game industry and the information technologies arouse networked games, which provide more entertaining and more addicting experience via real time communication between players. As a fact, the emerging social network over networked game is remarkable phenomena for the market. The networked serious game encouraging interaction between the players may attract users for longer period, and to users to experience various situations. Consequently, the introduction of the game must result in better educational outcomes. This paper designed and prototyped a networked hospital management game, and evaluated the prototype. A player, the president of each hospital, makes management decisions under various clinical indicators, and the decision affects condition of the other hospitals as well as of his/her own.

Methods

Construction of Hospital Model

We constructed hospital model which could be expressed most of resource for hospital management. These were human resource, hospital equipment, drugs, patients and so on. Player made decisions as director of hospital. This concept is as follows.

Multi-play

We had developed stand-alone hospital administration game previously [1]. However this game was not rich in diversity because this game included many function between all factors of this hospital models but many users could grasp this relation and they could increase hospital’s income. Therefore, we adopted multi-player style.

Results

The interface of this game is shown in figure 2. We evaluated this game for 14 medical students of Kyoto University medical school – the results are shown in table 1.

Table 1 – Result

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>Do you understand what decisions do affect the hospital management?</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Do you think that’s a good thing that the hospital management to learn to use the game?</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Do you have an interest in hospital management by using this game?</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Do you want to use this game when you learn the hospital management?</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Conclusion

We confirms the effectiveness of the multi-play serious game for the education of the hospital management. The introduction such games to the education for the clinical medicine as well the hospital management will enable them to produce highly trained people, and, as a result, will increase efficiency of medical activities.

Reference