

## What can we learn from the last 20 years of Role Based E-learning? Analysis and critique

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### Abstract

The paper presents an analysis and critique of the literature on online role play simulation games for education presented over the last 20 years at the various AACE conferences and journals as found in the EdItLib Digital Library. The analysis describes and critiques the way practitioners and researchers demarcated and understood the fields of online role play simulation games, it considers the design principles which they describe, and the theoretical conceptual schemes that are said to underlie such principles. The analysis, it is argued, shows that the field of online role play simulation games, which has significantly expanded during the last 20 years, is fractured to such an extent that it has become very difficult to evaluate the results of different projects. Some of the issues that disparately need to be addressed include theoretical conceptualization of what constitutes a role play simulation game, design principles that need to be more clearly articulated, and evaluation strategies need to be structured for comparisons to be useful.

### Introduction

Online role plays for education, or as in the recent rendition of the term "role based e-learning" (Wills et al., 2010), have been around at least since 1991 when Dr. Andrew Vincent began using them as a way to teach undergraduate students at Melbourne University about the complexities of Middle East politics (Vincent & Shepherd, 1998). During those days Dr. Vincent did not use any special software apart from the generic Unix email system or any pedagogical model to build the simulations used by the students. His insight that his students would learn about the political complexities of the Middle East by playing the roles of leaders from the region was based on the hunch that it would simply be fun to do so. Given that the Unix email alias system enabled concealing the real names of the students, it allowed them to interact free from the constraints of the normal university student's dynamics in a collaborative and creative way generating a lot of excitement and a lot of fun.

The success of those early role play simulation games generated interest and in the years following they were applied to a variety of other political science subjects (Linsler & Naidu, 1999; Naidu, Ip & Linsler 2000; Linsler, R. 2004; Shaw & Mendeloff, 2007; Hintjens, 2005, 2008) and in other fields such as Early Childhood studies (Wagaganeiki, Wilkes & Linsler, 2005, 2007), literature (Noggle, 2008), instructional design (Mufelleto, 2008), nursing (Nelson & Blenkin 2007, Nelson, 2008), foreign language learning (Coll-Garcia & Ip, 2008), strategic thinking (Linsler, Lindstadt and Vold, 2007, 2008) and more (Wills et al., 2007), at universities, high schools and the Australian, U.S. and Norwegian armies. Moreover a whole range of technologies were incorporated over the years, from web to 3D and mobile technologies, and a whole range of theories and perspectives were sought to anchor the role playing practice to constructivist and experiential pedagogy.

After 20 years of practice and theory, as the paper will show, there still remain many issues unresolved, including how to design such role play simulation games to ensure meeting specific learning objectives, how to make them fun to motivate students, and how to evaluate the creative output of students within their courses.

This paper aims to provide an analysis of the theory and practice of the last 20 years in order to evaluate whether we can locate specific design principles and strategies for evaluation that would help teachers create experiences for students that would enrich and motivate them to learn, and indeed learn the material required.

Using the EdItLib resource I have extracted 396 papers that either discuss specific role playing projects or mention them as strategies for education. An analysis of this body of work, though perhaps not comprehensive,

can tell us, what was done? Why it was done in that way? What results issued? And what recommendations were given? Analysis of these will enable us to provide a critique of both theory and practice to enable teachers to better understand the limitations and potential in the use of role playing games for education

To tackle such an analysis we must be clear on what the community of practitioners mean by "role play". Are role plays also simulations? In what sense are they games? And what are the factors that practitioners and researchers evaluate in judging whether such role plays/ games/ simulations/ scenarios are successful or unsuccessful for education? To answer these questions I turn to the literature.

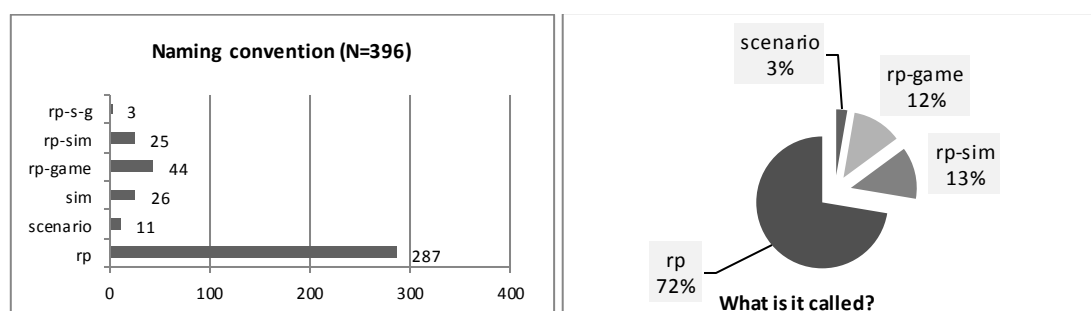
### Role plays, simulations and games – it's all the same, isn't it?

In reviewing the literature it became very obvious that what is referred to as a role play refers to very different types of projects, some of which seem to be pushing the boundary of what should be classified as role plays or simulations. For example, Dr. Vincent, mentioned in the introduction, clearly referred to his projects as Middle East politics simulations. Researchers who analyzed his work, including myself, referred to his work as role play simulations. But no one, apart from the present writer, has ever tried to clarify the sense in which those projects were indeed simulations or role plays or role play simulation games – the notion that it was indeed a role play was taken for granted. Another example is a project that has an instructor playing the role of Shakespeare while students interview him online (which preserves the instructor's anonymity) for students to find out about Shakespeare's life and works (Kolloff & Rahimzadeh, 2004). In another similar example, instructors played the roles of historical figures, Dewey, Aristotle and Mao (Lombard & Biglan, 2008). Yes, in both examples the instructors were playing a role, but not the students. Are the students really taking part in a role play? Or is it simply a very clever way for the students to ask the teachers questions? Consider a theatrical drama where actors on stage perform Ibsen's *Waiting for Godot* and invite the audience to ask the characters on stage what they are feeling. Is the audience part of the drama performed on stage? Perhaps, and similarly the Shakespeare and the Dewey-Aristotle-Mao projects should perhaps be understood as role plays, given that there is really no agreed principle to demarcate what constitutes a role play as different from an imaginative discussion, a simulation or a game.

It may be argued, in Dr. Vincent's case, that it's just semantics and it really makes no difference because we all intuitively understand that what was involved was a role play. Similarly it may be argued that in our Shakespeare and the Dewey-Aristotle-Mao examples, that it is enough for one participant or the instructors to be playing a role for the whole project to be understood as a role play. If so, are the three projects really comparable? Is a simulation also a role play? Do they share enough characteristics to say that they are of the same type of activity? Are we not comparing apples to pears?

To make matters worse, from the 396 papers which were selected on the basis of the exact phrase "role play" anywhere in the text (except bibliography), six categories emerged (Fig. 1), which in quite a few cases were used interchangeably in the same paper to describe the same project or recommend it as pedagogical tool to others. Generally, the range of labels can be condensed as shown (Fig. 1 - What is it called?) Generally there are those who consider role plays a type of simulation while others considered it as a type of game or scenario (Fig. 1 shows the distribution.) The great majority simply use "role play" without delving into such considerations.

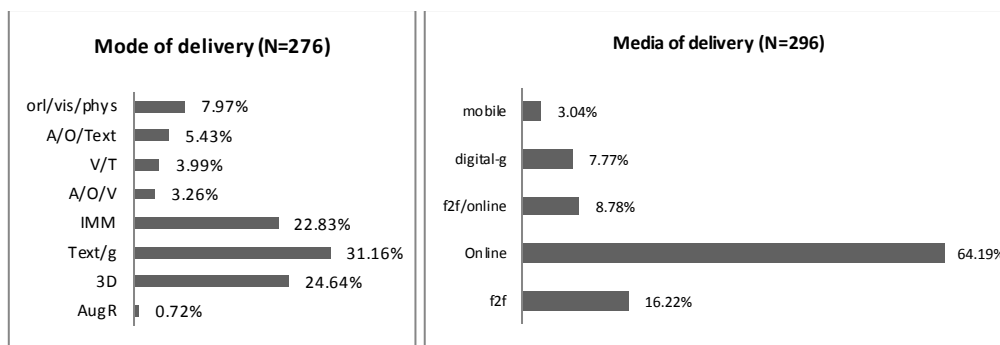
Fig. 1 Naming convention 1997-2010



Had the search term been Scenario based learning, or simulation, or games, we would have found many more projects that are in fact role based type of learning even if the term role play never appears (this is planned for a broader study to expand upon the present one.)

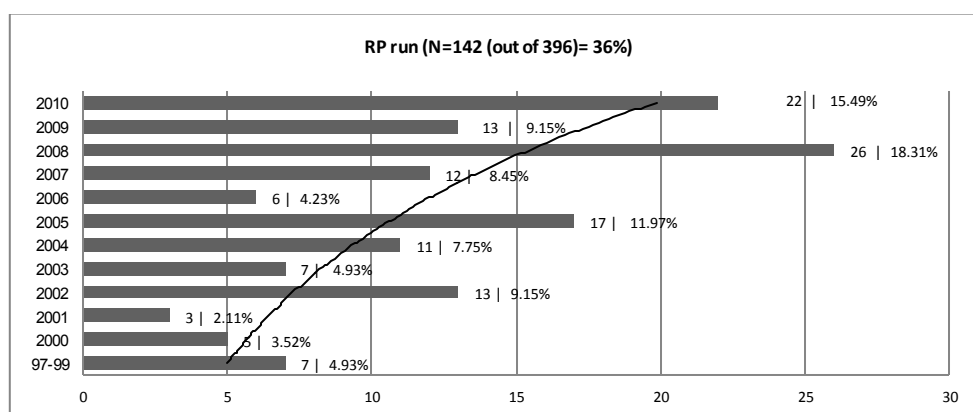
If there is variability in the naming convention there is also great variability in the way that role based learning is delivered to students. Text-only or text and images are the most common mode of delivery of role plays over the whole period of 1997-2010 with 31.2% of all reported, followed by 3D with 24.6% and Interactive Multi Media (IMM) with 22.8%. But this is misleading. Until 2004 Text and images were used in 41% of all reported role plays, IMM 21%, F2F 12% and 3D only 5.6%. From 2005 till 2010 34% of all role plays reported used 3D (the vast majority in Second Life), Text and images 26%, IMM 24%, and F2F only 6%.

**Fig. 2: Mode and Media of delivery 1997-2010**



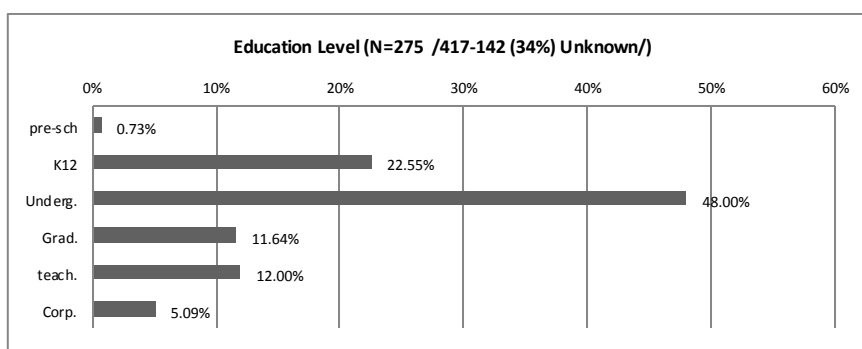
Online seemed to be the favorite method of delivery of role plays, but again I suspect this is vastly misleading since many if not most role plays delivered online have some elements of F2F which are not reported as part of the role play or are forgotten given that they blend into the institutional setting and practices of the schools.

**Fig. 3.1: Role Plays Reported actually Run (1997-2010)**



Interesting is the fact that the majority of papers which discuss or recommend role plays do not report actually running them – only 36% report running a role play. As for who gets to play, by far undergraduate students constituting almost half of those papers who specified the educational level at which their paper is addressing. Not a surprising finding given they are the captive audience of the majority who submit papers.

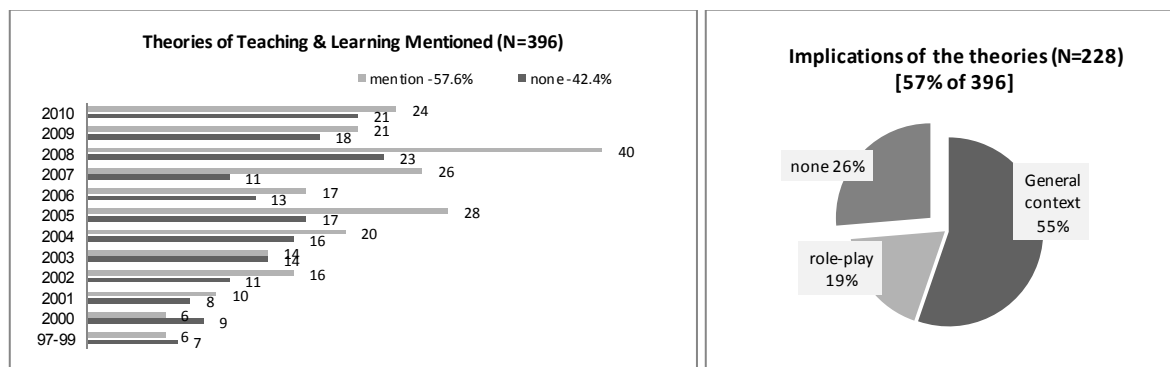
**Fig. 3.2: Education Level - RP reportedly used 1997-2010**



### Who needs theory when what we do is useful for education anyway?

Using role play for educational purposes presupposes some form of Teaching and Learning theory to support such use. Granted that role play was not the a central theme in most papers, still, as Fig. 4 shows, only 57.9% of papers mentioned teaching and learning theories, though not necessarily discussed them. Of these 55% outlined their implications in the general context of the papers, but only 19% related the implications issuing from the theory specifically to role plays. Constructivist and Cognitive theories are the main support not surprisingly.

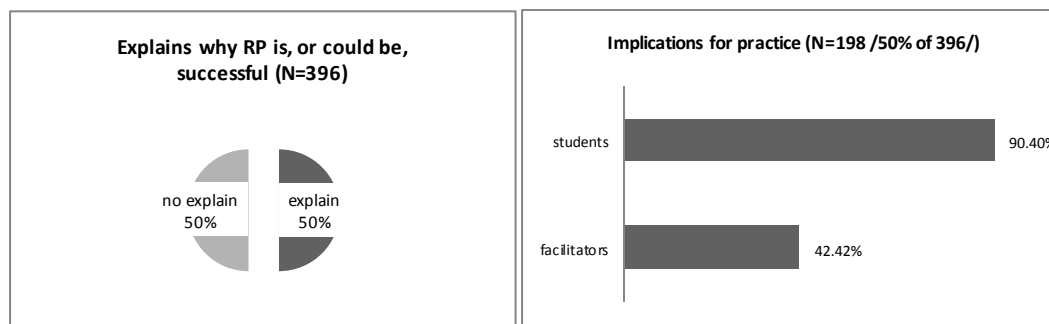
**Fig. 4:** Do we have theoretical support? (1997-2010)



### Are design principles irrelevant if students find the experience helpful?

Of the total number of papers, only 53.3% even outline or describe the design of the role plays they mention, discuss, or recommend and only 22.5% explain how the design aims to achieve the objectives of the role play that is mentioned, discussed or recommended. Even if design is not crucial, only 50% of papers give any explanation why role play may be successful. From those that do, 90% convey the implications for practice for students but only 42% also note the practical implications that teachers or facilitators need to face.

**Fig. 5** Explanation of successful use of RP and Implications for practice (1997-2010)



## Discussion

Game designers have made a major effort to distinguish games from play, from simulations and role plays in order to be able to evaluate the design principles of games and thus games to one another (Salen and Zimmerman, 2003). Though, their efforts may not have been completely successful (Linsler, Lindstad and Vold, 2008), it clearly makes a difference to the ability of subsequent researchers to evaluate design principle of games on the same theoretical level. The same cannot be said about role plays because there are no agreed criteria of what makes a role play comparable to another as the examples of Dr. Vincent's simulations and the Shakespeare-Dewey-Aristotle-Mao discussed above show.

Sauvé and his colleagues have made an impressive attempt to distinguish between games and simulations, arguing that lack of consensus on terminology has the result of providing contradictory results in research on learning (Sauvé et al. 2007.) Unfortunately, they don't even mention role play (it does appear in the title of one of their references.) Is that because role play is a game? Or is it a simulation or a simulation game?

A simulation, and there are various definitions surrounding the theme, is a rule based dynamic system, many insist closed and artificial, that is designed to act "like", or "similar" to, a different or 'real' system, as Sauvé and

colleagues suggest. If this is true then role plays certainly are simulations with the proviso that a human agent plays a role in the simulating system. The pun is intended, and will be discussed shortly as it points precisely to the intersection of language use, social life and the incredible power of role plays for pedagogical ends.

Sauvé and colleagues suggest that when a human agent is involved in the simulating system and there are winners and losers then it can be called a simulation game (Sauvé et.al 2007). But as Salen and Zimmerman have pointed out role plays do not have winners and losers – quantifiable outcomes in their terms - and are therefore not games (Salen & Zimmerman, 2003).

Role plays fall somewhere in between simulations and games, as data on naming conventions above reveals, and thus the confusion opens up the door to confounding research results. The implication for role based learning is that role play needs to be defined more precisely. My thesis is that all role plays are simulations, but not all simulations are role plays. In effect this puts role plays as a sub set of simulations. The difference is in the active involvement of a person within a simulation process. What distinguishes it from a game is that the rules of this game are not arbitrary but are social rules (Linser et al. 2007.)

The constructivist and cognitive theories that support using role plays in education all point to the social contexts of learning. But as our data above suggests, very few researchers, practitioners, role play designers and administrators actually examine these contexts fully if at all. The social rules of interaction (both within role plays and outside them) or the social roles (again both within and outside the Magic Circle (Linser et.al 2008)) in which learners and teachers are embedded (each playing much more than one role) are seldom explored. The necessity to pay more attention to theoretical considerations points to the nexus of constructivist, cognitive and social theory. With them we can explain the dynamics of the role play activity as a method of teaching/learning, and the socio-communicative context in which these are rooted as the field of role based learning in general and e-learning in particular.

When role play is recommended – is it based on a hypothesized connection between some cognitive activity and the dynamism enacted by players on the one hand and the playing individual's and group's social context on the other – what happens, cognitively, in 'taking the attitude of the other'? (G.H. Mead's phrase in *Mind Self and Society*) What happens conceptually, emotionally, motivationally? Clues for answers are scattered far and in between in the literature. How are they tied to the socio-psychological and cultural schematic representations that lie at the heart of theories emanating from Vygotsky, Piaget, Dewey, Bruner, and Bundura? What specific mechanisms and process take place in role playing that enable learning to occur? These issues are rarely discussed in this vast literature. Technical recommendations abound but deep analysis of these mechanisms is lacking.

I want to suggest, that to understand the utility of role play for learning in general and e-learning in particular we need to go beyond the technical implementation strategies and examine the socio-cultural and cognitive nexus with social theory that explains the significance of social roles in interaction. We often speak of the changing role of the teacher, the student and more generally managerial roles, facilitator, mediator roles etc. When we insert these roles in role plays for education, we must take account of their doubling or recursive effects. The role of the student as it lays under the role he takes in a role play. While suspension of disbelief is a thin membrane that separates these roles, its permeability is precisely that which allows activity to recursively reverberate as the critical cognitive and emotional effects that enable role based learning.

## **Conclusion**

This short paper examined a body of literature (396 papers) produced by the community of researchers and practitioners who have discussed and recommended role based learning and e-learning over the last 20 years. A major discomfoting finding is the lack of critical analysis of role play design and too few attempts to describe the implications of particular designs to the learning objectives and objectives of the role plays recommended. If we are to research role plays fruitfully and recommend role plays we need to be able to precisely define the structural designs we are recommending, to know why they work, not only that they do. We need to know under what conditions certain objectives can be met and what sort of dynamics need to unfold in order for role based e-learning to be effective as pedagogy. Dr. Vincent's intuition that role based learning is fun for students needs to be formalized.

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