March 12, 2008

Dean Julie K. Underwood
School of Education
123 Education Building

Dear Dean Underwood:

At its meeting on March 10, 2008, the Executive Committee of the Department of Curriculum and Instruction voted to recommend that Kurt D. Squire be promoted to Associate Professor with tenure with a unanimous vote of 17 to 0 (13 Yes votes present, 4 Yes votes on absentee ballots). The six faculty members who did not vote are currently on sabbatical. The Executive Committee also voiced strong support for early tenure because of market conditions.

Tenure History

Assistant Professor Kurt Squire is completing his fifth year as a faculty member in the Department of Curriculum in Instruction. Squire earned his PhD in Instructional Systems Technology from Indiana University in 2004. His graduate program focused on the design of learning environments from a situated learning perspective, and his dissertation examined learning in video game-based learning environments. While finishing his PhD, Squire worked under Dr. Henry Jenkins for two years at MIT and managed a game-based learning research laboratory. In the fall of 2003, Squire was hired in the Educational Communications and Technology (ECT) Program within Curriculum & Instruction.

Professor Squire is an internationally recognized leader within the field of digital media and learning. Squire has an exemplary scholarly professional trajectory in this field where he is outlining and shaping the key issues in educational technology. He accomplishes this by publishing key conceptual, empirical, and methodological articles that are well known and cited, and he engages in a wide range of leadership activities at the local, University, State, national and international levels. Squire is a prolific scholar, having published 18 peer reviewed journal articles and 12 articles (many of which are also peer reviewed) in edited volumes in the last 5 years. This work, which has been supported by grants from the MacArthur Foundation and the Department of Education, appears in top peer-reviewed journals of Educational Technology and Education research. Prior to coming to UW-Madison, Squire authored or co-authored another 20 articles and book chapters. Since his arrival at the UW-Madison, he has continued to be a prolific researcher, which we will consider below. Over the next few years, we expect Squire to continue along this trajectory of scholarship and teaching by testing an array of hypotheses generated within his current research, and by teaching a generation of undergraduate and graduate students. Further evidence of this trajectory can be found in the grants that Squire has submitted to the National Science Foundation and the Department of Education for new research [See #51, #52].
Squire’s leadership within the field is also reflected in his public service that goes beyond what would normally be expected of someone who is just beginning his academic career. Squire sits on the Editorial Boards of seven journals, is a reviewer for the National Science Foundation as well as the Singapore Ministry of Education, and serves on a Department of Education blue ribbon panel assessing the impact of Online Learning. Furthermore, Squire has made keynote and invited addresses at international conferences in Taiwan, Singapore, Scotland, Austria, and France. During his first two years at UW, Squire was instrumental in co-founding and co-directing the Education Arcade, an international initiative promoting research and development in video games for learning. Since that time, Squire has focused his service on building a broader initiative and research infrastructure here at UW-Madison by co-founding of the Games, Learning, and Society (GLS) Initiative, which is an interdisciplinary group of four faculty members and about 50 graduate students from various programs around the University. This GLS Initiative was created with the sponsorship from Ed Meachen, Associate Vice President in the Office of Learning and Information Technology at the University of Wisconsin-System. Ed Meachen describes Squire as

"one of the most prolific and successful researchers I know, and ... a top tier grant writer."

As a part of this work, Squire has also been a conference co-chair and/or steering committee member for the Games, Learning, and Society (GLS) Conference, an annual gathering that brings together 350 leaders on digital media and learning from around the country. The GLS Conference is in its third year and has evolved into a unique conference for games-based Education researchers. Squire is also currently serving as Director of the Games, Learning, and Society (GLS) Initiative, which currently has approximately $6 million in research funds, and recently competed in a nationwide competition for a Department of Education funded Center on Instructional Technology. At the local level, Squire also works closely with a network of over twenty Wisconsin teachers and has run an after-school group for disadvantaged children for four years.

Professor Squire is also an excellent teacher, as reflected in both his evaluations, letters from former students, and from faculty who have co-taught with him. Finally, Squire’s most unique contribution to teaching at UW is in creating a vibrant research community of students, faculty, and visiting scholars who investigate digital media and Education.

I. Research & Scholarship

The department concludes that Professor Squire has demonstrated excellence in his scholarship and developed a national and international reputation as a leader in the field of digital media and Education research. During this time Squire published 18 peer-reviewed journal articles and 12 articles in edited volumes. Professor Colin Lankshear from James Cook University, when speaking of Squire's stature in the field, claims that with respect to

"peers on an international level ... without question he is at the leading edge of games studies in relation to educational learning. I cannot think of anyone doing more influential research."
Squire’s research program integrates research and theory on digital media with theories of situated cognition to investigate how to design educational environments appropriate for a digital age. His research is part of (and indeed foundational within) a new field of digital media and learning that examines the impact of digital media taking place outside the formal school system. The significance of his research is to theorize about the nature of learning in a networked, digitally mediated world, and to design educational systems appropriate for this new digital society. In his letter of support, Professor Emeritus of Learning Sciences Allan Collins of Northwestern University claims that Squire has

"chosen to study one of the most important issues concerning the design of learning environments for the future: what is it about the design of games that makes them such compelling learning environments and how can we design educational activities that incorporate the features of games that make them so compelling."

This research has been published in leading peer review journals in digital media (e.g., *Games & Culture*), educational technology (e.g., *Journal of the Learning Sciences*), and in Education more generally (e.g., *Educational Researcher*).

Squire’s research program contains three overlapping strands, which together form a coherent line of inquiry investigating digital media and learning (see Table 1 below). This research includes:

1) studies of learning through game play in everyday, informal contexts
2) design-based research on after-school historical simulation game programs
3) design-based research on augmented reality games for literacy learning, which addresses both situated learning principles and also teachers’ needs.

These three strands of research complement one another, as they enable Squire to understand: how digitally-mediated learning occurs in every day settings; how such games can support academically-valued learning in after-school settings; and how new games might be designed specifically for learning in schools. Squire explicitly draws connections across these three strands of research in a several publications [#2, #4, #12, #15, #18].

A central theme in Squire’s research is the notion of design-based research. Design-based researchers design learning environments based on theoretical claims, investigate their impact on learning, and then iteratively refine them. This methodology enables researchers to advance theoretical claims about learning while also producing tangible products that demonstrate their value in the world. Squire’s notion of design-based research [#19, #25, #29] is guided by the Pragmatic philosophy of Peirce and James and treats a program “working in the world” as good evidence for making claims about learning within an educational context.
# Theoretical and Synthetic Scholarship


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## First Strand of Inquiry: Critical and ethnographic analysis of video games & cultures in everyday contexts

### Video Game Analysis


### Educational Analyses of Games


### Video Games as a New Literacy


### Mini-Ethnographies


### Interviews / Critical Analysis


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## Second Strand of Inquiry: Supporting productive literacies through historical simulation gaming

### Design-Based Research


### Computer Games in Classrooms


### Case Studies of Learning Through Games


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## Third Strand of Inquiry: Designing games for learning: Local augmented reality games on handheld computers

### Instructional Design Models


### Synthetic, Theoretical Work


### Case Studies of Learning


### Design Research Methodology

| #1 Squire, K.D. (in press). From information to experience: Place-based augmented reality games as a model for learning in a globally networked society. To appear in Teacher's College Record. |

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| Table 1 |
Squire’s scholarship unifies this work into a theory of learning and teaching in game-based environments, and is published in *Educational Researcher*, a leading educational research journal [#18]. This scholarship synthesizes his research and theory from media studies [#22] with his research within socio-cultural learning theory [#21, #26] to present a framework of video games “designing experience” for players. Squire’s work examines games as rule-based systems, or representational worlds, and shows how they are built according to particular theories. Learning occurs through performances within these worlds, through which players come to infer the rules governing how the world operates. The meanings of these performances, and the meanings of the synthetic worlds themselves (particularly how they are related to other experiences), are mediated by social contexts. Critically, Squire’s framework treats games not as “static” objects, but as dynamic, unfolding experiences and emphasizes how game designers create trajectories for players to begin as novices and leave the game experience as experts. This framework ties together Squire’s analyses of "indigenous" gaming communities (i.e., in the everyday worlds of work and play), research in designing after school centers for learning, and new games for instruction. Professor Jay Lemke of the University of Michigan sees Squire's research program as

"an unusually coherent program of inquiry, while also ranging more broadly over traditional curricular domains (history, literacy and media, science and environment)."

**Strand #1. Studies of learning through game play in everyday, informal contexts**

The first strand in Squire’s work conducts critical and ethnographic analyses of video game play in everyday, informal contexts. The goal of this research is to understand how people think, learn, and interact in digitally mediated worlds. Professor Collins concludes that Squire’s research has implications beyond the study of games to questions of literacy. Such games, he says

"use basic literacy practices to develop a whole range of other applied skills, such as negotiation, bargaining, forming alliances, strategizing and outwitting opponents, calculating which approach is most likely to work, and communicating with different kinds of people."

Squire shows how the digital learning spaces have permeable boundaries, which enable trajectories of experience that extend beyond the game space and into other spheres (such as school or work). This design feature – creating trajectories of experience for participants to take on new identities in new organizations is a key feature of Squire’s design work. Speaking of Squire’s work in this area, Professor Lankshear says that his work is "breathtaking" because it

"has reached a point of broad-based theoretical sophistication across the fields of learning science, sociocultural literacy studies, and situated cognition."

Squire builds on the theoretical tradition of situated cognition which treats thinking not only as a process of mentally manipulating abstract rules, but as one that involves perception and external symbol-manipulation within social institutions (Brown, Collins, & Duguid, 1989). Hence, his research is based on the claim that cognition is grounded in the everyday, which includes embodiment in our physical world, our bodies, our language, our social institutions, and our culture. As a result, researchers from the situated tradition tend to study learning in informal contexts – such as work settings, homes, and schools.
Learning science and technology researchers from the situated learning perspective are also interested in analyzing how people function with technologies and resources in complex social settings. These learning scientists are particularly interested in how technological advances such as smart-phones, ubiquitous Internet connectivity, and virtual worlds have a tremendous potential to reshape activity. Squire focused his attention on games as a fruitful context for understanding how people think, learn, and interact in complex digital environments which enable:

1) round-the-clock access to peers and other knowledge-building communities
2) access to archives of information anywhere and anytime
3) experience of roles (such as reliving historical eras or leading organizations comprised of people from around the world) that would otherwise be impossible (#32, #6).

Squire then applied this games-based learning research to how people learn, play, and participate in civic life outside of formal institutions such as schools. A hope (and indeed a future of the field) lies in making connections between the possibilities of digital media and everyday real-world practices of media-savvy consumers and producers, and then anticipating how social institutions (such as schools and government) would respond. This, in turn, would provide a basis for beginning to realign these social institutions with the digital age.

Squire’s contribution to this field is a body of research and theory elucidating an approach to video games as designed experience, and pedagogical models of game-based learning based on this framework. In paper #22, Squire analyzes the construction of action games to show how they produce mastery. Squire uses player interviews and observations in gamer culture to show how cultural practices (such as writing and reading strategy guides over the web) also contribute to learning. This research is among the first peer-reviewed scholarship on games and learning and is at the methodological forefront in the field for studying video games. As Professor Lankshear claims, Squire's research is "breaking substantial new theoretical ground around how learning occurs through performance in rule-based worlds of games."

Consistent with the situated views of learning of Lave & Wenger (1991), Squire [#10, #20] connects particular game play practices with broader social structures in developing an empirical account of learning. A goal of this research is to understand how game developers seek to "design" culture, so as to better understand the challenges facing educators interested in designing games with particular cultures (such as a culture of scientific inquiry). Similarly, Squire’s study of Apolyton University [#11], an online university of game players, elucidates a crucial link between virtual and "real life" practices. Squire articulates the process by which these players go from consumers to producers of knowledge.

Squire’s work on games and game cultures is well received internationally and been extended into other related fields such the library sciences. In another paper [#27], Squire applies these findings to the design of information systems and resources, finding that the information, tools, and resources used in informal settings challenge the traditional structure of schools and libraries. This paper, which was delivered at several international, national, and regional library meetings, concludes with practical programs for libraries to address the needs of the digital era. Similarly, another paper published in Mirror Images: Popular Culture in Education [#6]
suggests how the new capacities of digital media are challenging the goals of education and giving educators cause to rethink traditionally critical approaches to educational media. A final paper [#24] outlines an approach to game literacy for media educators. Professor Lemke affirms the international reception of Kurt's work by concluding that

"his work is well known and well regarded internationally, particularly in the European Union, where academic game studies is a more mature and prestigious field than it is yet here in the US, and where new media and education is a central emphasis of policy and funding."

With video games acting as a lightning rod for social and cultural issues, a distal goal of Squire’s research is to engage in public policy and debate about youth and media. In a paper chosen to be the keynote address of the Media, Culture, and Communication Special Interest Group at AERA[#10], Squire and his student, Ben DeVane, contribute one of the few studies to the field which shows that kids who play games like Grand Theft Auto “read” and interpret race and violence in the game according to their social backgrounds and national discourses on race, culture, and violence. The paper offers a new model of transgressive play whereby players can experiment with representations of race, class, and ethnicity in “safe” spaces. Between 2002-2006, Squire engaged in public dialogue about games and society through a monthly column Applied Game Theory co-written with Henry Jenkins for Computer Games magazine. A subset of these columns was recently reproduced as an edited chapter in the academic anthology Games Without Frontiers [#17].

In another article [#4], Squire explicitly links this basic research on video games and video-game culture with the design of game-based learning environments. “Video Games Literacies: A Literacy of Expertise,” is Squire’s contribution to the Handbook of Research on New Media Literacies, in which he connects research across several fields (game studies, educational technology, learning sciences, and literacy studies) to posit an emerging model of digital gaming literacies. The article "Game-Based Learning: An emerging paradigm of instruction" [#9] is a comparative case study of “advergaming” (i.e., games produced by the military and corporations for training purposes) which outlines an approach to one of the designs of educational games (and an implicit challenge for educators to respond to these other institutions which are leveraging games for their own ends). The article “Artists with the medium” [#3] examines contemporary developments within the games industry to suggest how educational games may evolve over the next decade. Professor Lemke believes that all of Squire's work offers "radically new educational options based on solid research."

**Strand # 2. Design-based research on after school historical simulation game programs**

Professor Squire’s second strand of research involves modifying existing commercial video games, and designing learning experiences for after-school groups of at-risk adolescents. The goal of the program is to help students move from game players to game makers, as they play and then create custom game-scenarios that tie to academically valued content (e.g., world history). This approach builds on Squire’s dissertation research that used such games for teaching world history in under-privileged schools. Re-analyzing this data [#26], Squire argues that the contemporary organization of schools (with limited time blocks, an emphasis on standardized outcomes, and few opportunities for students to pursue areas of interest) is a poor
fit for games – although games may be a better fit for the new digital economy. In the article "Open-ended video games" [#12], which is published in the MacArthur series on digital literacies, Squire links his basic research on games and game cultures with the design of after-school programs, outlining an approach he calls developing “centers of expertise” which promote the development of basic skills, creative problem solving with technology, and academic interests that span school and home. The specific design of this program is outlined in “From Users to Designers” [#21].

Over the past two years, this work has evolved to focus more specifically on an emerging equity gap between middle and working class students, with middle-class students gaining access to the kinds of technologies and social structures common in communities such as Apolyton University. With the support of the MacArthur Foundation, this research explores the potential of after-school centers to address this equity gap through game-based learning programs that can bridge home and school. Specifically, they help students:
1) gain missing “background” knowledge
2) develop analytic and creative problem-solving skills
3) form new identities as producers and consumers of knowledge in world history.

Longitudinal research results from this program are presented in papers [#7, #5]. Theoretically, Squire and grad student, Shree Durga, develop the notion of historiographic gaming to describe a form of productive play whereby players derive entertainment (and learning) through iteratively playing and creating historically-themed scenarios that explore particular ideas about history. Professor Collins praises Squire for finding that at-risk students

"who play real-time strategy games such as Civilization begin to check out books on ancient cultures and earn better grades in middle school."

Squire's research again extends beyond the study of games. In commenting on this work, Professor Seed, a professional historian at the University of California, Irvine, emphasizes "how impressed [she has] been by Kurt's genuine interest in teaching history .... [and how] he [was] the only on[e] who showed significant interest in grappling with the ways in which different historical approaches could be introduced into the learning process."

A key contribution of Squire's research here is an empirical account showing the importance of not only designing game systems, but also designing the social community surrounding the game. Drawing on socio-cultural learning theory and building on his research developed in the first strand of his research, Squire's design-based research places the locus of higher-order thinking skills, such as critical and creative problem solving, at the social level. Expert gaming performances are created, legitimized, and passed on through social interactions (like peer mentoring or debriefing sessions after play). Squire's work emphasizes the role of design-based research not just in creating new software or educational materials, but in designing new forms of social organization [#5, #7]. This strand of Squire's research enables him to focus explicitly on investigating the impact of such designs outside the constraints of traditional schooling.

**Strand #3. Design-based research on augmented reality games for literacy learning.**

The third and final strand of Squire's research is in designing augmented reality games for learning, games originally designed to reflect situated learning principles in science education. In a paper [#8] to be published in Educational Technology Research & Development, Squire and
colleague Eric Klopfer outline this model for designing new paradigms of educational software (the data for this paper was first analyzed and submitted in 2003 and will be coming out in 2008). This design-based research study draws on several case studies of an original educational software project (i.e., an engine for augmented reality gaming) to suggest how iterative design-based research might lead to new innovative forms of educational software. Augmented reality games build on the capabilities of mobile computing technologies – specifically, their portability, social interactivity, context sensitivity, connectivity, and individuality. In augmented reality games, students play as professionals investigating fictional but plausible dilemmas in their own communities. Students take handheld computing technologies into real world locations and access virtual data layered upon the world (using GPS technology).

The article “Augmented Reality Games on Handheld Computers” [#14] takes the set of technological affordances of these devices and specifically integrates them into a theory of situated cognition. The study hypothesizes that augmented reality simulation games might be used to foster scientific investigation skills. Based on four case studies of secondary environmental science students, it shows how positioning students in virtual investigations made their beliefs about science visible and helped them confront naïve beliefs about the nature of science. Playing the game in “real” space also triggered students’ pre-existing knowledge, suggesting that augmented reality simulation games might help connect academic content and practices with students’ lived worlds. This hypothesis is extended and tested further in “Mad City Mystery” [#13], a research study which analyzed participants’ scientific reasoning while playing an augmented reality game based on the economic, social, and environmental issues surrounding Madison’s Lake Mendota (one of the most scientifically studied lakes in the world). Examining different cohorts playing Mad City Mystery, the article shows how games can elicit complex forms of scientific argumentation and specifies the design features that contribute to it. Professor Collins finds that Squire’s

"design of a mystery [Mad City Mystery] to teach students to carry out scientific investigations to be very inventive .... [and] is the kind of science education that will elicit real involvement by students and focus their thinking on scientific inquiry rather than the regurgitation of facts."

Supported by a $1.5 million grant from the Department of Education, Squire is extending this research to investigate if such games can be used to support literacy learning in underprivileged students. Squire leads a research team distributed across UW-Madison, MIT, and Harvard University to refine this gaming platform for broader dissemination, to develop curricular models that integrate it into classroom practices, and to investigate its impact on student learning. The first research results from this work are beginning to emerge. Based on early research findings [#1], Squire and his students have refined their model of augmented reality games to explicitly engage students in their communities through investigating controversial local issues. These games and their implementations are the result of ongoing collaborations between Squire and local teachers, which is reflective of his approach to educational research. Rather than treating teachers as subjects or even participants, they are collaborators in a common research endeavor investigating student growth, understanding, and achievement.

Squire is already able to draw some conclusions from this empirical work. In “From information to experience: Place-based augmented reality games as a model for learning in a globally
networked society," to be published in *Teacher's College Record* [#1], Squire conducts a case study of learning that occurs through participation in the curriculum. Squire describes the interplay between researcher-derived goals, teachers’ intentions, and students’ learning, and finds evidence for increased motivation, reading comprehension, and facility with written text. Over the next two years, Squire and colleagues are refining their assessment instruments, creating control group experiments, and comparing the impact of this gaming curriculum to more conventional materials. Squire is currently working with 30 teachers in Wisconsin, and this academic year, will have a pool of over 1500 student participants that he can draw from as a research sample.

**Synthesis and Future Directions**

Although Professor Squire’s program of research has been presented as separate strands, it is important to underscore how each strand informs the other toward outlining a coherent picture of the impact that digital technologies may have on education. Squire’s synthesis of this work is articulated in “Video games and education: Designing learning systems for an interactive age” to be published in *Educational Technology* [#2]. Reviewing data collected from all three research strands, it argues that a mature field of digital games and learning will need to embrace the simulation capacities of games, their ability to facilitate students’ production of artifacts and participation in designing social systems, and the aesthetic dimensions of designing experience.

As the field of digital media and learning takes shape, debates about what it is and how it should be studied have begun to emerge. Squire is an active participant shaping these debates. In “Games, learning, and society: Building a field,” recently published in *Educational Technology* [#15], Squire argues that as video games emerge as a medium for learning, it is critical that educational technologists not view games narrowly, treating them as “vehicles” for efficiently or effectively delivering instruction, but rather that they treat them as indicative of a broader shift toward a culture of digital literacies. Drawing from Squire’s own work and the work of his colleagues in the Games Learning and Society (GLS) program [#15], Squire argues that the maturing field of digital learning needs to investigate how digital media are changing the goals of education, as well as how they can meet old goals more effectively and efficiently. Professor Lankshear is convinced that Squire is an outstanding young scholar who is

"a major force in his field .... [and] at the leading edge of an influential and growing field that will be of massive importance to the immediate future of education."

**Future Research**

Squire plans to integrate the study and design of video game-based learning environments by combining his research on open-ended simulation games and professional role-playing games into a unified academic learning environment for improving scientific and literacy skills. From a research perspective, Squire intends to continue building on his network of middle school science, mathematics, and literacy teachers so that he can begin to compare the effects of participating in game-based curricula with more traditional approaches.

Squire’s NSF Early CAREER grant proposal is a first draft of this research vision (#52). In this grant, Squire proposes to partner with Filament Games, a commercial game developer based in
Madison, Wisconsin, to create three prototype games where students investigate and develop responses to important local issues. Building on Squire's open-ended gaming models, these games will include scenario creation and manipulation tools that enable students to create their own game scenarios and models. Underlying this platform will be a game-creation community like the one that Squire studied in indigenous gaming communities. This five-year grant will focus on developing games that generate data based on student performance.

As Director of the Games, Learning, and Society (GLS) Initiative at the University of Wisconsin, Squire is also currently responding to a recent call for a $10 million Instructional Technology Center grant focusing on games and simulations in education (#51). In this grant, Squire will partner with researchers in the UW-Madison Games, Learning, and Society (GLS) Group, quantitative policy researchers at the University of Wisconsin-Madison, literacy researcher James Paul Gee at Arizona State University, and commercial game developers to create a state-of-the-art, massively-multiplayer game environment for learning. Crucially, this game environment will be available to students for both in-school and out-of-school use, allowing teachers, parents, and after school leaders to work with it, and enabling researchers to investigate multiple contexts of use. This proposal, currently in progress, investigates if a game-based learning system that includes both the technical and social design features of cutting-edge games can improve learning in low-achieving, at-risk students. Squire's role in this research will be to coordinate all activities, match game play design to curricular design, and research how participation in game play practices has an impact on learning, and the potential of such technologies to bring about systemic change in educational school systems.

As the field of digital media and learning matures, Squire is well poised to both begin applying these research findings toward pedagogical approaches that can be systematically investigated and tested, as well as keep abreast of new developments and technologies. Professor Lankshear concurs with this conclusion and says that:

"In my estimation his work is cutting edge in terms of developing approaches to and theorizing about designing games for learning and supporting productive pedagogies by means of simulation gaming. This is new field and he is at the head of it."

Professor Elliot Soloway of the University of Michigan reaches a similar conclusion. Squire, he says, is

"a nationwide leader in the educational video game field, even at this earlier place in his career."

II. Teaching

The department, on the basis of evaluation of his record, concludes that Professor Squire has demonstrated excellence in his teaching.

Formal Teaching

Professor Squire taught Seven (7) courses in Educational Communications and Technology at the Advanced Undergraduate and Graduate levels. Because Educational Communications and Technology is a graduate program in Curriculum and Instruction, the majority of these courses
are at the graduate level. These courses are listed in Table 2. Squire designed or redesigned 4 of these courses that are noted with a star (*). Professor Squire’s student ratings started slightly lower than Departmental means in his first year on campus but then consistently improved and remained near or above the Departmental means for Assistant Professors and tenured faculty after the first year (see Table 3 and Figure 1).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Semesters</th>
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<tr>
<td>C&amp;I 514</td>
<td>Instructional Computing in Schools I</td>
<td>Fall 2003, 2004, 2005</td>
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<tr>
<td>C&amp;I 606</td>
<td>*Critical Educational Practice on the Internet</td>
<td>Fall 2004</td>
</tr>
<tr>
<td>C&amp;I 614</td>
<td>*Instructional Computing in Schools II</td>
<td>Spring 2004, 2005; Fall 2007</td>
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<td>C&amp;I 675</td>
<td>*Teaching with Immersive Media</td>
<td>Summer 2005</td>
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<td>C&amp;I 701</td>
<td>Critical Analysis of the Use of Computers in the Curriculum</td>
<td>Fall 2006</td>
</tr>
<tr>
<td>C&amp;I 900</td>
<td>Seminar on Educational Technology</td>
<td>Spring 2006</td>
</tr>
</tbody>
</table>

Table 2: Summary of Courses Taught

Squire is an innovative and committed instructor at the forefront of his field who models intellectual curiosity in his courses, and seeks to introduce his students to issues and themes currently defining the field. Squire’s teaching blurs the lines between research and teaching, and theory and practice, thereby creating a classroom environment where students are treated as professionals. There are four themes evident in students’ evaluations of Squire’s teaching that further explicate his style. These are:

1) he has a deep knowledge of the field
2) he is flexible in responding to students’ needs, tailoring assignments to advance their development and providing extra assistance when necessary
3) he actively creates and maintains an approachable demeanor so that students feel at ease coming to him with intellectual and professional questions
4) he inspires them to extend themselves in new directions.

Squire accomplishes this at both the graduate and undergraduate levels, using courses in both cases and opportunities for students to develop along their career trajectories, something that is particularly important in technology courses, which attract a wide range of teachers, academics, software developers, researchers, post-doctoral students, and advanced undergraduates.

One clear theme cutting across students’ comments is that he is “very knowledgeable” about his field. In his graduate seminars, Squire contextualizes readings for students by giving them an historic backdrop to the intellectual trends in the field, stories behind particular projects and research initiatives, and the broader context of the players behind various journals, books, or conferences. As one student comments, “Some professors know their field – Kurt not only knows the field but he knows the people behind all the major publications. It was great to hear the stories.” At the same time, it is clear from student comments that there is more to this storytelling than simply regaling students; rather, they are practical stories that can help students understand the shape (and future) of the field. Indeed, many students perceive Squire’s classes as quite “practical” in how seminars connect theory and practice. Students in C&I 900 (Seminar
on Educational Technology) write, “Very practical. Good mix of theory and practice gave us lots of “tools” for our own work,” and “Professor Squire shared excellent examples from his own research experience.”

In order to meet students’ needs (as well as respond to the range of students in his courses), Squire builds a good deal of flexibility into his courses and seeks to respond to their individual needs. Students comment that they “like the freedom of this class” and that he is “very concerned about student needs.” Practicing teachers and neophytes with technology are particularly appreciative of this approach. One teacher writes, “Kurt allowed me to modify most projects to make them more meaningful to me and my current teaching.” Other teachers comment that, “I liked the change of actually using what I learned” and “I really learned a lot about how to use tech in the classroom.” Teachers note that Squire is “very open-ended and useful in terms of professional development.” As Squire writes in his teaching statement, one of his goals is to help neophytes with technology gain confidence, skills, and experience with technology so that they continue to learn and grow beyond when the course is done. One student summarized Squire’s approach by saying that “it opened a window of educational opportunity for me. I appreciated the efforts.”

Squire’s students perceive him as approachable, which is an important ingredient to this teaching success. As one student says, “Very approachable and open for new ideas on projects.” Students rate Squire as accessible and comment that he is willing to provide extra help when needed: “He was always available for help and never talked down to those of us who knew almost nothing about computers.” Other students (particularly advisees) commented that Squire made time for students outside of class: “Frequent in person meetings helps in constantly plotting my progress with the course.” Students note that this flexibility and accessibility enabled him to respond to a diverse range of abilities. Another student said that “Kurt was very understanding of the ability range within the class. He treated everyone as equals and was supportive throughout.”

The last dimension of Squire’s teaching evident in students’ comments is his passion for the field and ability to inspire students. As one student writes, “Kurt is a very inspiring professor. The way he weaves in his real-world experience has helped the content come alive for me.” This comment (and others like it) suggest how Squire uses personal and professional experience, his intimate knowledge of the field, and flexibility to create a classroom context where (many) students feel inspired to excel. In perhaps the most effuse praise for Professor Squire, another student comments, “The best class I’ve ever taken. Kurt has passion. No other class compares.”

Over the past four years, evaluations of Squire’s teaching steadily increased, with Squire earning a perfect 5/5 from all 11 students in the spring 2007 course, “Interactive Multimedia in the Curriculum.”
<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Number</th>
<th>N</th>
<th>Mean (sd)</th>
<th>Asst Prof Mean (sd)</th>
<th>Dept Mean (sd)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2003</td>
<td>C&amp;I 514</td>
<td>10</td>
<td>3.80 (.79)</td>
<td>4.26 (.89)</td>
<td>4.16 (.96)</td>
<td>I really learned a lot about how to use tech in the classroom. Very knowledgeable. He was always available for help and never talked down to those of us who knew almost nothing about computers.</td>
</tr>
<tr>
<td>Spring 2004</td>
<td>C&amp;I 614</td>
<td>21</td>
<td>4.43 (.81)</td>
<td>4.55 (.60)</td>
<td>4.27 (.83)</td>
<td>It opened a window of educational opportunity for me. I appreciated the efforts. Nicest professor ever. Please tenure immediately. Very concerned about student needs.</td>
</tr>
<tr>
<td>Spring 2004</td>
<td>C&amp;I 801</td>
<td>12</td>
<td>4.42 (.67)</td>
<td>4.55 (.60)</td>
<td>4.27 (.83)</td>
<td>Great reading materials. I like the class discussion, especially due to the combination of different voices.</td>
</tr>
<tr>
<td>Fall 2004</td>
<td>C&amp;I 514</td>
<td>13</td>
<td>4.46 (.52)</td>
<td>4.21 (.82)</td>
<td>4.18 (.89)</td>
<td>Kurt was very understanding of the ability range within the class. He treated everyone as equals and was supportive throughout.</td>
</tr>
<tr>
<td>Fall 2004</td>
<td>C&amp;I 606</td>
<td>11</td>
<td>4.36 (.67)</td>
<td>4.21 (.82)</td>
<td>4.18 (.89)</td>
<td>Just-in-time lessons were very good and engaging. I loved the style of teaching.</td>
</tr>
<tr>
<td>Spring 2005</td>
<td>C&amp;I 614</td>
<td>16</td>
<td>4.81 (.40)</td>
<td>4.37 (.82)</td>
<td>4.24 (.87)</td>
<td>Very open-ended and useful in terms of professional development. Very approachable and open for new ideas on projects. Kurt is a very inspiring professor. The way he weaves in his real-world experience has helped the content come alive for me. Some professors know their field – Kurt not only knows the field but he knows the people behind all the major publications. It was great to</td>
</tr>
<tr>
<td>Semester</td>
<td>Course</td>
<td>Grade</td>
<td>I</td>
<td>II</td>
<td>III</td>
<td>IV</td>
</tr>
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</tr>
<tr>
<td>Spring 2005</td>
<td>C&amp;I 801</td>
<td>15</td>
<td>4.67 (.49)</td>
<td>4.37 (.82)</td>
<td>4.24 (.87)</td>
<td><strong>I’m glad you’re not a teacher but rather someone who taught us something. This guy knows too much.</strong>&lt;br&gt;<strong>One of the best in the world.</strong>&lt;br&gt;<strong>Homeboy knows his stuff.</strong></td>
</tr>
<tr>
<td>Fall 2005</td>
<td>C&amp;I 514</td>
<td>12</td>
<td>4.17 (.58)</td>
<td>4.18 (.87)</td>
<td>4.28 (.85)</td>
<td><strong>I like the freedom of this class.</strong>&lt;br&gt;<strong>I liked the change of actually using what I learned.</strong>&lt;br&gt;<strong>Kurt allowed me to modify most projects to make them more meaningful to me and my current teaching.</strong></td>
</tr>
<tr>
<td>Fall 2005</td>
<td>C&amp;I 701</td>
<td>10</td>
<td>4.40 (.97)</td>
<td>4.18 (.87)</td>
<td>4.28 (.85)</td>
<td><strong>The best class I’ve ever taken.</strong>&lt;br&gt;<strong>Kurt has passion. No other class compares. Kurt is an underrated genius.</strong>&lt;br&gt;<strong>Frequent in person meetings helps in constantly plotting my progress with the course.</strong></td>
</tr>
<tr>
<td>Spring 2006</td>
<td>C&amp;I 801</td>
<td>12</td>
<td>4.42 (.79)</td>
<td>4.22** (.97)</td>
<td>4.15** (.92)</td>
<td><strong>Very practical. Good mix of theory and practice gave us lots of “tools” for our own work.</strong>&lt;br&gt;<strong>Professor Squire shared excellent examples from his own research experience.</strong></td>
</tr>
<tr>
<td>Spring 2006</td>
<td>C&amp;I 900</td>
<td>4</td>
<td>4.75 (.50)</td>
<td>4.22** (.97)</td>
<td>4.15** (.92)</td>
<td><strong>Clearly and expert in his field.</strong>&lt;br&gt;<strong>The best in his field, he also knows how to explain it well.</strong></td>
</tr>
<tr>
<td>Fall 2006 *</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>**Released from two courses with a buy-out. Table 3 **</td>
</tr>
<tr>
<td>Spring 2007</td>
<td>C&amp;I 801</td>
<td>11</td>
<td>5.00 (.00)</td>
<td>4.51 (.69)</td>
<td>4.15 (.92)</td>
<td><strong>Departmental means do not include Squire data</strong></td>
</tr>
<tr>
<td>Fall 2007</td>
<td>C&amp;I 614</td>
<td>11</td>
<td>4.0 (.00)</td>
<td>4.24** (.93)</td>
<td>4.18** (.89)</td>
<td><strong>Departmental means do not include Squire data</strong></td>
</tr>
<tr>
<td>Spring 2008</td>
<td>C&amp;I 801</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td><strong>Departmental means do not include Squire data</strong></td>
</tr>
</tbody>
</table>
All of these comments are reinforced by Professor Jim Gee of Arizona State University, who team-taught with Squire while at the University of Wisconsin-Madison. Squire, claims Professor Gee, is "a charismatic teacher who inspires his students. He does not just get them to consume knowledge, but to use media, game mods, models, and digital tools to produce knowledge. This is why the program at UW is so well known."

<table>
<thead>
<tr>
<th>Teaching Evaluations</th>
<th>Fall2003 mean</th>
<th>Spr2004 mean</th>
<th>Fall2004 mean</th>
<th>Spr2005 mean</th>
<th>Fall2005 mean</th>
<th>Spr2006 mean</th>
<th>Fall2006 mean</th>
<th>Spr2007 mean</th>
<th>Fall2007 mean</th>
<th>Spr2008 mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurt Squire</td>
<td>3.8</td>
<td>4.43</td>
<td>4.41</td>
<td>4.79</td>
<td>4.29</td>
<td>4.59</td>
<td>*</td>
<td>5.00</td>
<td>4.00</td>
<td></td>
</tr>
<tr>
<td>Total Dept.</td>
<td>4.16</td>
<td>4.27</td>
<td>4.18</td>
<td>4.24</td>
<td>4.28</td>
<td>4.15</td>
<td>4.27</td>
<td>4.15</td>
<td>4.18</td>
<td></td>
</tr>
</tbody>
</table>

* Courses Bought Out

Figure 1
Informal Teaching

Among dimensions of informal teaching that are significant are the mentoring and advising of doctoral and master's degree students. To date, Professor Squire helped 8 Master’s students graduate and sat on 5 Master’s Theses and 9 Ph.D. committees. Due to the interdisciplinary nature of Squire’s expertise, which cuts across computer science, communication arts, information sciences and science education, Squire has been sought out as a committee member by students in computer science, chemistry, communication arts, composition and rhetoric, and fine arts. Squire is also in high demand as an advisor, and currently serves as the primary advisor for 12 Ph.D. students and 5 Master’s students. Eight of these Ph.D. students are funded on by research projects related to Dr. Squire’s research.

In addition, Squire’s informal teaching extended out of the classroom in the form of informal reading groups, independent studies, and hosting visiting scholars. Squire regularly led reading groups with advanced students and visiting scholars to help them keep abreast and further specialize within the field. Over the past four years, 33 students have enrolled in such reading groups with Squire. In addition, he has hosted Ph.D.s and post docs from Vienna and Milan, Italy, seeking to study with Squire due to his expertise with digital game-based learning.

Finally, as Director of the Games, Learning, and Society (GLS) Initiative, Squire provided informal guidance and feedback to a group of four faculty and over 40 students in a variety of ways. Squire led group-wide grant writing sessions, conference planning sessions, and other mentoring sessions (such as how to present at professional conferences) all of which are designed to provide students the kind of professional mentoring unavailable in standard courses, but essential for further academic success.

Letters from Students

Letters from current and former students all make the case that Squire demonstrates excellence in teaching, mentoring, and advising. For example, Jim Mathews, who currently works for Squire on the STAR Schools project says that the teachers in this project

"truly feel that their voice has been heard. I think this really speaks to Professor Squire's commitment to participatory design as a model for building a professional learning community. It also says a lot about his respect for teachers and willingness to utilize their local knowledge and classroom experience."

Levi Giovanetto, a former student and now a law student at the University of Chicago, says that Squire provided

"the most rewarding experience I had during my time there ... [on] a research project where we went weekly to use an educational game in an after-school program for underprivileged middle schoolers."

He continues:

"No classroom discussion or demonstration compares to a lesson in the field working in a professor’s research project. Yet even participating in field work with Professor Squire was not the end of the lesson. Professor Squire also gave his students the opportunity to
co-author the publication of the research, so we would then understand what it meant to put that methodology into writing and have it held up to public scrutiny."

Finally, Lauren Silberman, an undergraduate student who participated in a 2004 Symposium with Professor Squire, was quoted in the University of Wisconsin News that Squire's help as a mentor made a difference:

"He made the experience really interesting for me. He was very helpful and involved, from the initial project goals until the final presentation at the Undergraduate Symposium. The entire project would have been really overwhelming without his support; he even let me enroll in his graduate class to help me learn more about the field."

III. SERVICE

The department concludes that on the basis of Professor Squire's record his record of service has been exemplary, with substantive contributions at the national, University, Department, and local levels.

National Service

Nationally, Squire sat on the review boards of eight journals. He is an editor of *E-Learning*, and a consulting editor of *Educational Technology Research & Development*, which is a leading journal in educational technology. He is also active as an editor in the field of digital media and learning, serving on the editorial boards of *Games & Culture, Convergence*, and *The International Journal of Computer Game Research* and editing a special issue on games and learning for *Technology Trends*. Squire also served on the board of the recent book the *Handbook of Educational Gaming*, and is a manuscript reviewer for many top journals and presses, ranging from *Cognition & Instruction* to MIT Press. In 2006-2007, he won the award for outstanding reviewer from *Educational Researcher*. Squire is also an active reviewer of grants for the National Science Foundation, the Singapore Ministry of Education Programme Office, and Cable’s Leaders in Learning Program. Squire served on the two advisory boards: 1) The Department of Education, Evidence-based Practices in Online Learning panel, and the 2) Pacific Educational Research Lab JUMP Project which, funded by the Department of Education, is developing commercial-grade games for literacy instruction. Both are projects of a national scope and comprised of nationally known experts in the field. That such national service is unusual for a junior scholar reflects Squire’s leadership within the field.

Squire is an active contributor to several organizations and conferences in the field, including the American Educational Research Association (AERA), The International Society of the Learning Sciences and its conferences (The International Conference of the Learning Sciences and Computer Supported Collaborative Learning), as well as the annual meeting of the Digital Games Research Association (DiGRA). Squire has reviewed proposals for these conferences over the past several years. In 2007-2008, Squire served as chair of Division C, Section 7 (Research on Learning Environments, Technology) of AERA.
Squire has also been foundational in running two conferences, both of which have been instrumental in the development of the field of games and learning. For two years, Squire was Co-Director of The Education Arcade, a two-day conference held before the Electronic Entertainment Exposition (an industry event that draws 100,000 people). The Education Arcade brought together government leaders, developers, publishers, and media scholars in order to call attention to the untapped potential of video games to support learning. This event drew together leaders ranging from the Director of Technology for the Department of Education to Vice Presidents of major game studios.

Squire also began collaborating with colleagues in the GLS Initiative to organize a more academically oriented event that would still cross the boundaries of government, industry, and academia, and would be more critical in focus and less “promotional” in nature. For the last four years, Squire has been a Co-Chair and Steering committee member of the GLS Conference, held annually in Madison, Wisconsin. His responsibilities for this conference include planning, organizing, reviewing approximately 150 proposals, and leading a team of 25 volunteers in executing this conference of 350 participants.

University Service

Within the University, Squire’s primary service has been in leading the GLS Initiative, which involved charting out strategic direction, designing and overseeing a website, the program lecture series, promoting the program internationally, obtaining and managing shared space and resources, coordinating courses, identifying research grant opportunities for faculty, and networking with national and international initiatives and organizations. Currently, the GLS Initiative is coordinating with faculty in Computer Science and Communication Arts in order to expand toward a University-wide initiative. In addition, Squire served on the School of Education Information Technology Policy Advisory Committee (ITPAC) Committee and served on the hiring committee for the Executive Director of the University of Wisconsin Academic ADL Colab.

In addition, Squire has given a number of special lectures at UW. He made two presentations to the Spencer doctoral program seminar on his research and on how graduate students can become more involved in educational research. Squire also made two presentations to the Visual Culture faculty research forum based on his research and participated in a variety of Visual Culture forum activities. Finally, Squire addressed a group of University of Wisconsin librarians in their Evolving Directions in Academic Research and Resources lecture series. As these lectures would indicate, Squire is a highly sought after and active participant in the University community.

At the Departmental level, Squire served on three committees: the Graduate Programs Committee (2004-2006; present), the Space Committee (2004-2005), and the Student Awards Committee (2006-present).
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Public Service:

Finally, Squire engaged in a wide range of local public service related to and extending from his research which is worth mention. Since arriving at UW-Madison, Squire has been a project volunteer with the Wisconsin Youth Company, running after school programs for disadvantaged children. This program runs during the summers, and after school during the school year, and serves nearly 100 children.

Further, as a part of Squire’s research on augmented reality games for learning, he worked with over 30 Wisconsin teachers and thousands of students. As a part of this work, Squire conducted professional development workshops for teachers and classroom visits to give guest lectures about various topics surrounding games. Although some of this work is a natural outgrowth of his research, other activities, such as guest lectures to classes about how to enter the video game industry, are outside the scope of this research.

At the University level, Squire collaborated worked with The University of Wisconsin Academic Advanced Distributed (ADL) Collaboratory, to build a research and development infrastructure for digital learning in the State of Wisconsin. These activities include advising their directors and staff, attending fundraising meetings on their behalf, and advising new start-up companies working in digital games and learning.

Squire also participated in a variety of news programs at the national, State and local level to promote understanding of the issues surrounding digital media and learning. Squire was a featured guest on At Issue with Ben Merens, on Wisconsin Public Radio. Squire also contributed expert perspectives to the NPR All Things Considered, Aliens Teach radio program where he commented on a story on the emergence of video games as a medium for instruction in higher education. While making an invited address at the University of the West Indies, Squire appeared on both radio and television on Caribbean Broadcasting Barbados. Squire was the subject of a feature story on the local NBC affiliate, and provided expert commentary for The Video Game Revolution, a program that aired on Public Broadcasting System.

Finally, Squire gave 14 talks to professional organizations in the Madison area, ranging from Accelerate Madison, a group of digital technology leaders, to middle school language arts teachers from the region at Waukesha, to technology forums hosted by the Department of Public Instruction.

In summary, Professor Squire has engaged in a variety of service activities aimed at furthering the field, contributing to the intellectual life of the University, and improving local education. Indeed, the breadth of Squire’s activities points to how his work embodies the Wisconsin idea. Ed Meachen of UW-System concludes that

"UW-Madison and the School of Education are so fortunate to have such a passionate proponent, and so productive a scholar, in improving education and student learning."
IV. Summary of Scholarship, Teaching, and Service

Professor Squire is an exemplary candidate for tenure and promotion. He consistently exceeded the Department’s expectations for Assistant Professors, achieving excellence across scholarship, teaching, and service.

Further, the Department believes that Squire is on the "cutting edge" of his field and will continue on a trajectory of international excellence and leadership in the field. Already, Squire is a prolific scholar publishing in the best journals, serving as an advisor to top journals and panels, and raising grant money to support his research. As the field of digital learning matures, his future research and his proposed research center will be of international quality investigating these issues. Squire and his research team should be able to propel the field forward, continuing to investigate digital media practices outside of schools, but also designing interventions that can test these theories within schools. Squire’s most recent work, as outlined in his proposals to the National Science Foundation and Department of Education, suggests that he has the ability to organize and conceptualize research in ways that continue to challenge our ways of thinking about learning in school and non-school contexts. The Department concludes that Squire is, and will continue to be, a leading researcher and asset to the academic mission of the School and the University.

Sincerely,

Alan L. Lockwood
Professor and Chair