

Comprehensive Exam Proposal
PhD in Applied Developmental Psychology
Portland State University

Submitted by:

James L. DeLaney 3rd

Fall 2020

For examinations scheduled for:

Spring 2021

COMPREHENSIVE EXAM COMMITTEE:

Ellen Skinner, Major Chair

Thomas Kindermann, Minor Chair

Jason Newsom

The members of the comprehensive examination committee for James DeLaney approve the comprehensive exam proposal submitted herein.

Ellen Skinner

Thomas Kindermann

Jason Newsom

Date:

Approved:

Date:

Todd Bodner
Graduate Program Committee Chair

Personal Statement

I am proposing to take my comprehensive exams as a next step in my doctoral training, towards my degree in applied developmental psychology with a specialty in developmental methods. As a scholar my driving questions revolve around finding and applying the most appropriate methods to the study of social influence on human development and change processes.

This personal statement is organized into three main sections. The first section provides a brief overview of the experiences leading to my decision to pursue the doctoral degree in applied developmental psychology. The second section describes how the proposed examination materials have contributed to my identity as a scholar. The third and final section poses my plans for dissertation topics which depend heavily on the proposed materials for these comprehensive exams.

A brief overview of my academic journey. My undergraduate coursework started with psychology, and after my first undergraduate course in statistics, veered into a more methodologically focused trajectory. Towards the end of my undergraduate degree, I began volunteering as a research assistant with the school of social work on a project which followed the tradition of Patterson and Dishion's work at the Oregon Social Learning Institute. This experience would develop for observational methodology and the study of social influence. This led me to Dr. Kindermann and his use of observational data analysis, especially with regards to deducing patterns of social influence between social partners.

I began the Applied Developmental Psychology program with ambiguity towards my scholarly identity. While classes such as *Advanced Applied Developmental Psychology* invigorated me by challenging my predispositions and assumptions towards developmental theory and methodology, I continued struggling in convincing myself that children's peer

relations in schools were driving phenomena as a scholar and researcher. Dr. Kindermann provided an opportunity for my thesis which did tackle peer relations, but also, emphasized my larger area of interest in ‘fine-tuning’ developmental methods, specifically, observational methods on the study social interactions.

My thesis project turned out to be a major pivotal point in my scholarly identity. After struggling with aspects of my thesis, an opportunity arose which led me to take a year-long hiatus from the program to pursue a career in data analysis at a major university. My responsibilities at OHSU were in stark contrast to my doctoral studies. I analyzed human resource data and created graphs. After a year of working at OHSU, I returned to the Applied Developmental program with a renewed clarity and focus regarding my research and sense of ‘fit’ within developmental psychology.

My scholarly profile and examination topics. My experiences up to this point had made me realize that going forward with my degree was an appropriate choice. I see myself as an applied developmental psychologist who specializes in ‘matching methods to questions’, especially those questions regarding social influence on developmental change. The courses and materials outlined in this proposal make it noticeably clear to me that schools are not just ‘schools’ and adolescent peer relations have implications beyond classrooms. Schools and peer contexts are incredibly rich grounds for the study of developmental change – perhaps the richest natural settings for the study of social influence on developmental processes.

The courses *Peer Relations in Education* and *Student Motivation and Development* have indirectly emphasized the notion that schools provide one of the most stable long-term normative contexts to study change. Schools are a context in which development happens; it is a place where we can discover ‘why people do what they do’, with concrete outcomes (e.g., achievement

and student engagement), and sources of influence (e.g., parents, teachers, peers). Additionally, it is a place where we can see changes across pivotal lifespan transitions, such as early childhood to adolescence, to answer specific substantive questions, such as optimizing student engagement in schools, while also obtaining more general insight regarding normative developmental processes. For my comprehensive exams, I want to solidify my understanding of developmental dynamics regarding motivational constructs, and how emerging social contexts of peers can provide a critical resource for amplifying or altering children's developmental trajectories in educational settings.

Advanced Applied Developmental Psychology is the foundational course for my major courses. I propose that my exams focus on the lifespan perspective, meta-theory and ecological theories, stability, and change, and finally, developmental methodologies. I chose *Child Development* as a 'exemplar' of many principles from *Advanced Applied Developmental Psychology* (e.g., conflicting meta-theories, development across multiple timescales, social influence via family interactions), which extend the purview of concepts presented in other major courses (e.g., *Peer Relations in Education* and *Student Motivation and Development*) to more general developmental contexts and topics (e.g. family interactions, attachment theories, and early cognitive development and learning).

My minor coursework focuses on the developmental and statistical methods which are most directly used in my current research and future dissertation plans. The topics for *Thesis : Reinforcement Detection* were selected based on readings taken from categorical analysis and sequential analysis. While I did not take a formal class in these areas, the readings were selected to provide an opportunity to revisit readings in similar classes (e.g. categorical data analysis) which I cover concepts fundamental to the reinforcement detection strategies used in my thesis

(e.g., sequential analysis and generalized estimating equations). I selected *Multi-level Regression* since this is a set of techniques which is necessary for longitudinal data analysis in developmental psychology. Lastly, I chose *Observational Methods* since I will likely be using observational datasets for my dissertation and later in my career.

Dissertation plans and long-term goals. I conclude the personal statement with some plans for my dissertation and future research goals. My dissertation will likely follow-up my thesis regarding the detection of naturally occurring reinforcement processes in observational datasets. This project would draw heavily upon my minor exam areas, especially the *Multivariate* and *Multilevel Regression Analyses*, when devising more comprehensive strategies for best capturing complex reinforcement processes. Additionally, this plan would likely entail the re-analysis of parent-child interactions from a reinforcement lens, which would draw heavily on *Advanced Applied Developmental Psychology* and *Child Development* courses.

An alternative topic for the dissertation would involve further development of strategies for identifying peer groups, as a follow-up to Cairn's and colleagues (1990) SCM program. This project would draw heavily upon the *Peer Relationships and Education* course materials, specifically, peer influence and methodologies sections. In either scenario for a dissertation (or others for which have yet to be discussed), the comprehensive exam topics outlined in this proposal were selected to best test the foundational knowledge to my future career and interests as a developmental scholar.

Program-Related Graduate Level Course List

(All graduate level courses for examination were taken at PSU)

| Dept. | Course No. | Course Title | Grade | Credits | Term(s) |
|--------------------------------|------------|--------------------------------|-------|---------|-----------|
| Applied Psychology Core | | | | | |
| PSY | 615 | ADV APP DVLPMNTL PSY | A- | 5 | Winter 14 |
| PSY | 616 | ADV ORGANIZATIONAL PSY | B+ | 4 | Fall 14 |
| PSY | 614 | ADV APPL SOCIAL PSY | B | 4 | Spring 15 |
| ELP | 618 | ETHICS & PROF ISS APP RSRCH/PR | A | 1 | Winter 16 |
| Methodology Core | | | | | |
| PSY | 621 | UNIVAR QUANT METH | A- | 5 | Fall 13 |
| PSY | 622 | MULT REGRESS & UQM | A- | 4 | Winter 14 |
| PSY | 624 | RESEARCH DESIGN IN APPL PSYCH | A | 4 | Spring 14 |
| PSY | 610 | TOP: HLM FOR LONGITUDNL ANALYS | A | 4 | Fall 15 |
| THESIS | | | | | |
| PSY | 503 | THESIS | IP | 4 | Spring 14 |
| PSY | 503 | THESIS | IP | 5 | Fall 15 |
| PSY | 503 | THESIS | IP | 1 | Fall 19 |
| ELECTIVES | | | | | |
| MTH | 530 | TOPICS MATH MODELING | B- | 3 | Fall 13 |
| PSY | 601 | RES: NETWORK DATA ENT | A | 1 | Fall 13 |
| PSY | 510 | TOP: OBSERVATIONAL METHODS | A | 1 | Spring 14 |
| PSY | 610 | TOP: TCHRS, TCH'G, & TCHER DEV | A | 1 | Fall 14 |
| PSY | 610 | PROJ: DATA ENTRY | A | 1 | Spring 15 |
| PSY | 503 | TOP: PEER RELATIONSHIPS IN ED | A | 4 | Spring 15 |
| PSY | 501 | RES: DATA ENTRY | A | 4 | Fall 15 |
| PSY | 560 | CHILD PSYCHOLOGY | A | 1 | Fall 15 |
| PSY | 610 | TOP: STUDENTS, MTVN, & DVLPMT | A | 4 | Fall 15 |
| PSY | 506 | PROJ: REINFORCER DETECTION | A | 2 | Winter 16 |
| PSY | 656 | ADV DATA ANALYS: MULTI LEV REG | A | 4 | Winter 16 |

| | | | | | |
|-----|-----|---------------------------------|----|---|-----------|
| PSY | 510 | TOP: INT PSYCHOLOGICAL MEASURE | B+ | 4 | Spring 16 |
| PSY | 606 | PROJ: ADULT DEVELOPMENT | A | 1 | Spring 16 |
| PSY | 610 | TOP: APP EXPERIMENTAL RESEARCH | A | 4 | Spring 16 |
| PSY | 601 | RES: LAVAN REANALYSIS | A | 5 | Spring 17 |
| PSY | 610 | TOP: RSRCH ERLY CHLDHHD DEC SCH | A | 4 | Spring 17 |

Course Allocation for Examination Topic Areas

I. Major Area: Applied Developmental Psychology

EXAMINER: Ellen Skinner (Chair)

Contributing examiners: Thomas Kindermann

| Dept. | Course No. | Course Title | Grade | Credits | Term(s) | Instructor |
|--------------------------------|------------|-------------------------------|-------|---------|---------|--------------------|
| PSY | 615 | ADV APP DVLPMNTL PSY | A | 4 | W 16 | Skinner & Mashburn |
| PSY | 560 | CHILD PSYCHOLOGY | A | 4 | F 17 | Kindermann |
| PSY | 503 | TOP: PEER RELATIONSHIPS IN ED | A | 4 | S 15 | Kindermann |
| PSY | 610 | TOP: STUDENTS, MTVN, & DVLPMT | A | 4 | F 15 | Skinner |
| Total credit hours = 16 | | | | | | |

Examination Topics:

Advanced Applied Developmental Psychology

- I. Life-Span Developmental Psychology
- II. Developmental Meta-Theories
- III. Ecological Theories
- IV. Stability and Change – Individual Differences and Trajectories
- V. Contextual Influences on Development

Child Development

- I. Meta Theories and Key Issues in Child Development
- II. Emotional Development and Attachment
- III. Cognitive Development
- IV. Parent and Family and Peer Relationship

Peer Relationships in Education

- I. Sociometrics, Crowds, Friends, & Peer Groups
- II. Homophily & Selection
- III. Peer Influence
- IV. Peer Methods
- V. Peer Ecologies

Student Motivation and Development

- I. Motivation
- II. Interpersonal Relationships
- III. School Transitions
- IV. Parents, Teachers, Peers, and Students' Academic Experiences

Major Reading List:

Advanced Applied Developmental Psychology

Lifespan Developmental Psychology

- Baltes, P. B. (1987). Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology*, 23, 611 – 626.
- Baltes, P. B., Reese, H. W., & Nesselroade, J. R. (1977). Chapter 9. The Scope of Developmental Psychology. *Life-span developmental psychology: Introduction to research methods*. Monterey, CA: Brooks/Cole.
- Baltes, P. B., Reese, H. W., & Nesselroade, J. R. (1977). Chapter 10. Targets of Developmental Analysis. *Life-span developmental psychology: Introduction to research methods*. Monterey, CA: Brooks/Cole.
- Baltes, P. B., Reese, H. W., & Nesselroade, J. R. (1977). Chapter 11. Developmental Research Paradigms. *Life-span developmental psychology: Introduction to research methods*. Monterey, CA: Brooks/Cole.

Developmental Meta-Theories

- Skinner, E. A., Kindermann, T., & Mashburn, A. (2019). *Lifespan Developmental Systems: Meta-theory, Methodology and the Study of Applied Problems*. Routledge.
- Magnusson, D. (2001). The holistic-interactionist paradigm: Some directions for empirical research. *European Psychologist*, 6, 151-162.
- Overton, W. F. (2013). A new paradigm for developmental science: Relationism and relational-developmental systems. *Applied Developmental Science*, 17(2), 94-107.
- Reese, H., & Overton, W. (1970). Models and theories of development. In Goulet & P.B. Baltes (eds.), *Life-span developmental psychology* (pp. 115 – 145). New York: Academic Press.

Ecological Theories

Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon (Series Ed.) & R. M. Lerner (Vol. Ed.), *Handbook of child psychology: Vol. 1: Theoretical models of human development* (pp. 993 – 1028). New York: Wiley.

Sameroff, A. (2010). A unified theory of development: A dialectic integration of nature and nurture. *Child Development*, 81, 6-22.

Stability and Change – Individual Differences & Trajectories

Ferrer, E., & McArdle, J. J. (2010). Longitudinal modeling of developmental changes in psychological research. *Current Directions in Psychological Science*, 19(3), 149-154.

Kindermann, T. A., & Skinner, E. A. (1992). Modeling environmental development: Individual and contextual trajectories. In J.B. Asendorpf & J. Valisner (Eds.), *Framing stability and change: An investigation into methodological issues* (pp. 155-190). Newbury, CA: Sage.

Developmental Methods

Miller, S. A. (2007). *Developmental research methods*. Thousand Oaks, CA: Sage. Chapter 3. Designs.

Rutter, M. (2007). Proceeding from observed correlation to causal inference: The use of natural experiments. *Perspectives on Psychological Science*, 2(4), 377-395.

Shaughnessy, J. & Zechmeister, E. (1990, 3rd Ed.). *Research methods in psychology*. Chapter 3: Observation, (pp. 74 – 110). New York: McGraw Hill.

Child Development

Meta Theories and Key Issues in Child Development

Skinner, E. A., Kindermann, T., & Mashburn, A. (2019). Chapter 3. Dueling Theories of Attachment. *Lifespan developmental systems: Meta-theories, methodology, and the study of applied problems*. New York: Routledge.

Skinner, E. A., Kindermann, T., & Mashburn, A. (2019). Chapter 4. Assumptions about Humans and Development. *Lifespan developmental systems: Meta-theories, methodology, and the study of applied problems*. New York: Routledge.

Ryder, N.B. (1965). The cohort as a concept in the study of social change. *American Sociological Review*, 30, 843-861.

Baltes, P.B. (1968). Longitudinal and cross-sectional sequences in the study of age and generation effects. *Human Development*, 11(3), 145-171.

Campbell, D.T. (1969). Reforms as experiments. *American Psychologist*, 24(4), 409-429.

Emotions Relationships and Attachment

Ainsworth, M. S. (1979). Mother-infant attachment. *American Psychologist*, 34, 932-937.

Ainsworth, M. D. S., & Bell, S. M. (1977). Infant crying and maternal responsiveness: A rejoinder to Gewirtz and Boyd. *Child Development*, 1208-1216.

Gewirtz, J. L. (1969). Mechanisms of social learning: Some roles of stimulation and behavior in

- early development. In D. A. Goslin (Ed.) *Handbook of socialization theory and research* (pp. 160-173). Chicago: Rand-McNally.
- Gewirtz, J. L., & Boyd, E. F. (1977a). Does maternal responding imply reduced infant crying? A critique of the 1972 Bell and Ainsworth report. *Child Development*, 1200-1207.
- Gewirtz, J. L., & Boyd, E. F. (1977b). In reply to the rejoinder to our critique of the 1972 Bell and Ainsworth report. *Child Development*, 48(4), 1217-8.
- Groh, A. M., Fearon, R. M., IJzendoorn, M. H., Bakermans-Kranenburg, M. J., & Roisman, G. I. (2017). Attachment in the early life course: Meta-analytic evidence for its role in socioemotional development. *Child Development Perspectives*, 11(1), 70-76.
- Sherman, L. J., Rice, K., & Cassidy, J. (2015). Infant capacities related to building internal working models of attachment figures: A theoretical and empirical review. *Developmental Review*, 37, 109-141.
- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, 28(5), 759-775.
- Belsky, J., & Fearon, R. P. (2002). Early attachment security, subsequent maternal sensitivity, and later child development: does continuity in development depend upon continuity of caregiving? *Attachment & Human Development*, 4(3), 361-387.

Cognitive Development

- Greenough, W. T., Black, J. E., & Wallace, C. S. (1987). Experience and brain development. *Child Development*, 58, 539-559.
- Brainerd, C. J. (1972). Neo-Piagetian training experiments revisited: Is there any support for the cognitive-developmental stage hypothesis? *Cognition*, 2(3), 349-370.
- Fox, N. A., & Rutter, M. (2010). Introduction to the special section on the effects of early experience on development. *Child Development*, 81(1), 23-27.
- Fox, S. E., Levitt, P., & Nelson III, C. A. (2010). How the timing and quality of early experiences influence the development of brain architecture. *Child Development*, 81(1), 28-40.
- Greenough, W. T., Black, J. E., & Wallace, C. S. (1987). Experience and brain development. *Child Development*, 58, 539-559.
- Nelson, C. A. (2000). Neural plasticity and human development: The role of early experience in sculpting memory systems. *Developmental Science*, 3(2), 115-136.

Parent and family and Peer Relationships

- Parten, M. B. (1933). Social play among preschool children. *The Journal of Abnormal and Social Psychology*, 28(2), 136-147.
- Garbarino, J. (1977). The human ecology of child maltreatment: A conceptual model for research. *Journal of Marriage and the Family*, 721-735.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 6, 723-742.

- Belsky, J. (1993). Etiology of child maltreatment: A developmental ecological analysis. *Psychological Bulletin*, 114(3), 413-434.
- Case, R., Hayward, S., Lewis, M., & Hurst, P. (1988). Toward a neo-Piagetian theory of cognitive and emotional development. *Developmental Review*, 8, 1-51.
- Sameroff, A. J., & Chandler, M. J. (1975). Reproductive risk and the continuum of caretaking casualty. *Review of Child Development Research*, 4, 187-244.
- Kochanska, G., Aksan, N., & Carlson (2005). Temperament, relationships, and young children's receptive cooperation with their parents. *Developmental Psychology*, 41, 648-660.
- Dodge, K. A., Greenberg, M. T., Malone, P. S., Conduct Problems Prevention Research Group (2008). Testing an idealized dynamic cascade model of the development of serious violence in adolescence. *Child Development*, 79, 1907-1927.
- Bugental, D. B., Shennum, W. A., & Shaver, P. (1984). "Difficult" children as elicitors and targets of adult communication patterns: An attributional-behavioral transactional analysis. *Monographs of the Society for Research in Child Development*, 1-81.
- Hoffman, M. L. (1975). Moral internalization, parental power, and the nature of parent-child interaction. *Developmental Psychology*, 11(2), 228.

School Motivation, and Development

Defining and Distinguishing Motivation from Related Processes

- Skinner, E.A. (2016). Engagement and disaffection as central to processes of motivational resilience development. In K. Wentzel & D. Miele (Eds.), *Handbook of motivation in school*, Mahwah, NJ: Erlbaum.
- Skinner, E.A., Kindermann, T.A., Connell, J.P., & Wellborn, J.G. (2009). Engagement and disaffection as organizational constructs in the dynamics of motivational development. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation in school* (p. 223-246). Mahwah, NJ: Erlbaum.
- Skinner, E.A., & Pitzer, J.R. (2012). Developmental dynamics of student engagement, coping, and everyday resilience. In *Handbook of research on student engagement* (pp. 21-44). Springer US.
- Wigfield, A., Eccles, J.S., Fredericks, J.A., Simpkins, S., Roeser, R.W., & Schiefele, U. (2015). Development of achievement motivation and engagement. In R.M. Lerner & M. Lamb (Eds.), *Handbook of Child Psychology and Developmental Science* (pp. 657-691). New York: Wiley.

Perspectives on Motivation

- Anderman, E. M., & Patrick, H. (2012). Achievement goal theory, conceptualization of ability/intelligence, and classroom climate. In S. L. Christenson, A. L. Reschly, & C. Wy8lie (Eds.), *Handbook of research on student engagement* (pp. 173-191). New York: Springer.
- Connell, J.P., & Wellborn, J.G. (1991). Competence, autonomy and relatedness: A motivational analysis of self-system processes. In M. Gunnar & L.A. Sroufe (Eds.), Minnesota

Symposium on Child Psychology, Vol. 23: Self processes in development (pp. 43-77). Chicago, IL: University of Chicago Press.

- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, 59, 117-142.
- Gottfried, A. E., Fleming, J. S., & Gottfried, A. W. (2001). Continuity of academic intrinsic motivation from childhood to late adolescence: A longitudinal study. *Journal of Educational Psychology* 93(1), 3-13.
- Graham, S., & Taylor, A. Z. (2016). Attribution theory and motivation in school. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation in school*, 2nd ed. (pp. 11-33). New York: Routledge.
- Muenks, K., Wigfield, A., & Eccles, J. S. (2018). I can do this! The development and calibration of children's expectations for success and competence beliefs. *Development Review*, 48, 24-39.
- Wigfield, A., Tonks, S. M., & Klauda, S. L. (2016). Expectancy-value theory. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation in school*, 2nd ed. (pp. 55-74). New York: Routledge.

Motivational climates of K-12 classrooms

- Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, 21(1), 225-241.
- Roeser, R., Strobel, K.R., & Quihuis, G. (2002). Studying early adolescents' academic motivation, social-emotional functioning, and engagement in learning: Variable- and person-centered approaches. *Anxiety, Stress, and Coping*, 15, 345-368.
- Skinner, E.A., & Belmont, M.J. (1993). Motivation in the classroom: Reciprocal effects of teacher behavior and student engagement across the school year. *Journal of Educational Psychology*, 85, 571-581.
- Wentzel, K. (2016). Teacher-student relationships. In K. R. Wentzel & D. B. Miele (Eds.), *Handbook of motivation in school*, 2nd ed. (pp. 211-230). New York: Routledge.

Peer Relationships and Education

Introduction, Reviews

- Gifford-Smith, M. E., & Brownell, C. A. (2003). Childhood peer relationships: social acceptance, friendships, and peer networks. *Journal of School Psychology, 41*(4), 235–284.
- Kindermann, T. (2016). Peer Group Influences on Students' Academic Motivation. In K. R. Wentzel & G. B. Ramani (Eds.), *Handbook of Social Influences in School Contexts: Social-Emotional, Motivation, and Cognitive Outcomes*.
- Wentzel, K. R., & Muenks, K. (2016). Peer influence on students' motivation, academic achievement, and social behavior. In K. R. Wentzel & G. B. Ramani (Eds.), *Handbook of social influences in school contexts: Social-emotional, motivation, and cognitive outcomes* (pp. 13-30). New York: Routledge.

Sociometrics, Crowds, Friends, & Peer Groups

- Berndt, T. J. (2004). Children's Friendships: Shifts Over a Half-Century in Perspectives on Their Development and Their Effects. *Merrill-Palmer Quarterly, 50*(3), 206–223.
- Cillessen, A., & Rose, A. (2005). Understanding popularity in the peer system. *Current Directions in Psychological Science, 14*, 102-105.
- Kindermann, T. A., & Skinner, E. A. (2012). Will the real peer group please stand up? A “tensegrity” approach to examining the synergistic influences of peer groups and friendship networks on academic development. In *Peer relationships and adjustment at school* (pp. 51–77). Charlotte, NC, US: IAP Information Age Publishing.
- Sussman, S., Pokhrel, P., Ashmore, R. D., & Brown, B. B. (2007). Adolescent peer group identification and characteristics: A review of the literature. *Addictive Behaviors, 32*(8), 1602–1627.
- Urberg, K. A., Degirmencioglu, S. M., Tolson, J. M., Halliday-Scher, K. (2000). Adolescent social crowds: Measurement and relationship to friendships. *Journal of adolescent research, 15*, 427-445.

Homophily & Selection

- Cairns, R. B., Perrin, J. E., & Cairns, B. D. (1985). Social Structure and Social Cognition in Early Adolescence: Affiliative Patterns. *The Journal of Early Adolescence, 5*(3), 339–355.
- Hamm, J. V. (2000). Do birds of a feather flock together? The variable bases for African American, Asian American, and European American adolescents' selection of similar friends. *Developmental Psychology, 36*(2), 209–219.
- Kandel, D. B. (1978). Homophily, Selection, and Socialization in Adolescent Friendships. *American Journal of Sociology, 84*(2), 427–436.

Peer Influence

- Altermatt, E. R. & Pomerantz, E. M. (2003). The development of competence-related and motivational beliefs: An investigation of similarity and influence among friends. *Journal of Educational Psychology*, 95, 111-123.
- Dishion, T. J., McCord, J., & Poulin, F. (1999). When interventions harm: Peer groups and problem behavior. *American Psychologist*, 54(9), 755–764.
- Kindermann, T. A. (2007). Effects of Naturally Existing Peer Groups on Changes in Academic Engagement in a Cohort of Sixth Graders. *Child Development*, 78(4), 1186–1203.
- Parker, P. D., Ciarrochi, J., Heaven, P., Marshall, S., Sahdra, B., & Kiuru, N. (2015). Hope, Friends, and Subjective Well-Being: A Social Network Approach to Peer Group Contextual Effects. *Child Development*, 86(2), 642–650.
- Ryan, A. M. (2001). The peer group as a context for the development of young adolescent motivation and achievement. *Child Development*, 72, 4, 1135-1150.

Peer Methods

- Aral, S., Muchnik, L., & Sundararajan, A. (2009). Distinguishing influence-based contagion from homophily-driven diffusion in dynamic networks. *Proceedings of the National Academy of Sciences*, 106(51), 21544–21549.
- Cairns, R. B., Gariepy, J. L., Kindermann, T., & Leung, M. C. (1990). Identifying social clusters in natural settings. *Unpublished manuscript, University of North Carolina at Chapel Hill*.
- Kindermann, T. A. (2006). Can we make causal inferences about the influence of children's naturally existing social networks on their school motivation. In N. A. Card, J. P. Selig, & T. D. Little (Eds.), *Modeling dyadic and interdependent data in the developmental and behavioral sciences* (pp. 335–368). London; New York: Routledge.
- Popp, D., Laursen, B., Kerr, M., Stattin, H., & Burk, W. K. (2008). Modeling homophily over time with an actor-partner interdependence model. *Developmental Psychology*, 44(4), 1028–1039.
- Sage, N. A., & Kindermann, T. A. (1999). Peer networks, behavior contingencies, and children's engagement in the classroom. *Merrill-Palmer Quarterly*, 45(1), 143–171.

Peer Ecologies

- Farmer, T. W., McAuliffe Lines, M., & Hamm, J. V. (2011). Revealing the invisible hand: The role of teachers in children's peer experiences. *Journal of Applied Developmental Psychology*, 32(5), 247–256.
- Hamm, J. V., Farmer, T. W., Dadisman, K., Gravelle, M., & Murray, A. R. (2011). Teachers' attunement to students' peer group affiliations as a source of improved student experiences of the school social-affective context following the middle school transition. *Journal of Applied Developmental Psychology*, 32(5), 267–277.
- Vollet, J. W., Kindermann, T. A., & Skinner, E. A. (2017). In peer matters, teachers matter: Peer group influences on students' engagement depend on teacher involvement. *Journal of Educational Psychology*, 109(5), 635–652.

- Wentzel, K. R., Battle, A., Russell, S. L., & Looney, L. B. (2010). Social supports from teachers and peers as predictors of academic and social motivation. *Contemporary Educational Psychology*, 35(3), 193–202.
- Zimmer-Gembeck, M. J., Chipuer, H. M., Hanisch, M., Creed, P. A., & McGregor, L. (2006). Relationships at school and stage-environment fit as resources for adolescent engagement and achievement. *Journal of Adolescence*, 29(6), 911–933.

II. Minor Area: Developmental Research Methods

EXAMINER:

Contributing Examiner:

| Dept. | Course No. | Course Title | Grade | Credits | Term(s) | Instructor |
|--------------------------------|------------|---------------------------------|-------|---------|-----------|------------|
| PSY | 503 | THESIS: REINFORCEMENT DETECTION | A | 4 | Spring 20 | Kindermann |
| PSY | 510 | TOP: OBSERVATIONAL METHODS | A | 4 | Spring 14 | Kindermann |
| PSY | 656 | ADV DATA ANALYS: MULTI LEV REG | A | 4 | Winter 16 | Newsom |
| Total credit hours = 12 | | | | | | |

Examination Topics

Reinforcement Detection

- I. Basic Issues in sequential analysis, sequential z-scores, interrater agreement statistics
- II. Distribution of categorical variables, 2 x 2 contingency tables, I x J tables
- III. Regression Models for Binary and Ordinal Outcomes: Binary Outcomes, Diagnostics and Longitudinal Applications, and Sample Size

Observational Methods

- I. Collecting data : Observational designs, strategies, Obtrusiveness
- II. Reliability
- III. Analyzing Observations

Multilevel Regression

- I. Multilevel models: level 1, level 2, cross-level interactions
- II. Estimation Methods : Assumptions and Diagnostics
- III. Binary and Non-continuous Outcomes
- IV. Missing Data, Sample Size, and Power

Minor Reading List:

Reinforcement Detection

Basic Issues in sequential analysis, sequential z-scores, interrater agreement statistics

- Banerjee, M., Capozzoli, M., McSweeney, L., & Sinha, D. (1999). Beyond kappa: A review of interrater agreement measures. *Canadian Journal of statistics*, 27(1), 3-23.
- Bakeman, R., & Quera, V. (1995). Log-linear approaches to lag-sequential analysis when consecutive codes may and cannot repeat. *Psychological Bulletin*, 118 (2).
- Allison P. D., & Liker, J.K. (1982). Analyzing sequential categorical data on dyadic Interaction. *Psychological Bulletin*, 91, 393 – 403.

Distribution of categorical variables, 2 x 2 contingency tables, I x J tables

- Agresti, A. (2013). Chapter 2. Analyzing contingency tables. *Categorical data analysis*. New York: Wiley.
- Agresti, A. (2013). Chapter 8. Models for matched Pairs. *Categorical data analysis*. New York: Wiley.
- Delucchi, K. L. (1993). On the use and misuse of chi-square. In G. Keren & C. Lewis (Eds.), *A handbook for data analysis in the behavioral sciences* (pp. 295–319). Hillsdale, NJ: Lawrence Erlbaum.

Regression Models for Binary Outcomes, Diagnostics and Longitudinal Applications, and Sample Size

- Azen, R., & Walker, C. M. (2011). Chapter 8: Logistic Regression with Continuous Predictors. *Categorical data analysis for the behavioral and social sciences*. New York: Routledge.
- Azen, R., & Walker, C. M. (2011). Chapter 9: Logistic Regression with Categorical Predictors. *Categorical data analysis for the behavioral and social sciences*. New York: Routledge.
- Hanley, J. A., Negassa, A., & Forrester, J. E. (2003). Statistical analysis of correlated data using generalized estimating equations: an orientation. *American journal of epidemiology*, 157(4), 364-37
- Liang, K.Y., & Zeger, S.L. (1986). Longitudinal data analyses using generalized linear models. *Biometrika*, 73(1), 13-22.
- Wang, M. (2014). Generalized estimating equations in longitudinal data analysis: a review and recent developments. *Advances in Statistics*, 2014.

Multilevel Regression

Regression Review and Overview of Multilevel Regression

- Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 1. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)*. London: Sage.
- Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 2: Multilevel Theories, Multistage Sampling, and Multilevel Models. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 6-13). London: Sage.
- Kreft, I., & de Leeuw, J. (1998). *Introducing multilevel modeling*. London: Sage.
- Hox, J. (2010). pp. 1-8.

Random vs. Fixed Coefficients, random intercept model, intraclass correlation coefficient

- Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 4. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* London: Sage.
- Hays, W.L. (1973). ICC. *Statistics for the social sciences* (pp. 535-536). New York: Holt, Rinehart, & Winston.
- From Steele, R.G.D., Torrie, J.H., & Dickey, D.A. (1997). *Principles and procedures of statistics: A biometric approach (3rd Ed.)*. Boston, MA: McGraw-Hill. (pp. 297-299). (ICC)
- Beauchamp, M. R., Bray, S. R., Fielding, A., & Eys, M. A. (2005). A multilevel investigation of the relationship between role ambiguity and role efficacy in sport. *Psychology of Sport and Exercise*, 6, 289-302.

Full Multilevel Regression Models : Varying Slopes, Hypothesis Tests, Explained Variance, Model Building

- Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 5: The Hierarchical Linear Model. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 74-93). London: Sage.
- Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 6. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 74-93). London: Sage.
- Roberts, K.J., Monaco, J.P., Stovall, H., & Foster, V. (2011). Explained variance in multilevel models (pp. 219-230). In J.J. Hox & J.K. Roberts (Eds.), *Handbook of Advanced Multilevel Analysis*. New York: Routledge.
- Grodsky, E., & Pager, D. (2001). The structure of disadvantage: Individual and occupational determinants of the Black-White wage gap. *American Sociological Review*, 66, 542-567.

Full Multilevel Regression Models : Cross-level Interactions & Centering

- Preacher, K.J., Curran, P.J., & Bauer, D.J. (2006). Computational tools for probing interaction effects in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of Educational and Behavioral Statistics*, 31, 437-448.
- Zohar, D., & Luria, G. (2005). A multilevel model of safety climate: Cross-level relationships between organization and group-Level climates. *Journal of Applied Psychology*, 90, 616-628.

Estimation Methods, Assumptions, and Diagnostics

Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 10: Assumptions of the Hierarchical Linear Model. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 152-175). London: Sage.

Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 12: Other Methods and Models. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 194-204). London: Sage.

Raudenbush, S.W., & Bryk, A.S., (2002) Hierarchical linear models: Applications and data analysis methods. Thousand Oaks, CA: Sage. Pp. 266-280.

Growth Curve Models: Linear Growth

Singer & Willett, Chapter 2 & 3.

Hox, J. (2010). Chapter 5. *Multilevel analysis: Techniques and applications, second edition* (pp. 112-140). New York: Routledge.

Stoddard, S.A, Zimmerman, M.A., Bauermeister, J.A. (2011). Thinking About the Future as a Way to Succeed in the Present: A Longitudinal Study of Future Orientation and Violent Behaviors Among African American Youth. *American Journal of Community Psychology*, 48, 238–246.

Growth Curve Models: Extensions of Growth Curve Models

Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 15: *An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 130-151). London: Sage

Singer & Willett, Chapter 6.

Hindman, A.H., Cromley, J.G., Skibbe, L.E., and Miller, A.L (2011). Conventional and Piecewise Growth Modeling Techniques: Applications and Implications for Investigating Head Start Children's Early Literacy Learning. *Evaluation Review*, 35, 204 - 239.

Binary and Noncontinuous Outcomes

Hox, J. (2010). Chapter 6: The Multilevel Generalized Linear Model for Dichotomous Data and Proportions. *Multilevel analysis: Techniques and applications, second edition* (pp. 112-140). New York: Routledge.

Hox, J. (2010). Chapter 7: The Multilevel Generalized Linear Model for Categorical and Count Data. *Multilevel analysis: Techniques and applications, second edition* (pp. 141-158). New York: Routledge.

Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 17: Discrete Dependent Variables. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 289-322). London: Sage.

Hedeker, D. (2005). Generalized linear mixed models. In B. Everitt & D. Howell (Eds.), *Encyclopedia of Statistics in Behavioral Science*, New York: Wiley

Missing Data, Sample Size Issues, and Power

- Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 9: Missing Data. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 130-151). London: Sage.
- Snijders, T.A.B., & Bosker, R.J. (2012). Chapter 11: Designing Multilevel Studies. *Multilevel analysis: An introduction to basic and advanced multilevel modeling (2nd edition)* (pp. 176-193). London: Sage.
- Hox, J. (2010). Chapter 12: Sample Sizes and Power Analysis in Multilevel Regression. *Multilevel analysis: Techniques and applications, second edition* (pp. 233-256). New York: Routledge.

Observational Methods

Collecting data: Observational design, strategies, obtrusiveness

- Bakeman, R. M., & Gottman, J. M. (1997, 2nd ed.). Chapter 3. Recording behavioral sequences. *Observing interaction: An introduction to sequential analysis*. New York: Cambridge University Press.
- Kindermann, T. A. (1993). Fostering independence in everyday mother-child interactions: Longitudinal changes in contingency patterns as children grow competent in developmental tasks. *International Journal of Behavioral Development*, 16, 513-535.
- Pellegrini, A. D., Symons, F., & Hoch, J. (2012, 3rd Ed.). Chapter 8. Sampling behavior streams. *Observing children in their natural worlds: A methodological primer*. New York: Psychology Press.
- Pellegrini, A. D. (1996, 1st Ed.). Chapter 12. Using observational methods in educational settings. *Observing children in their natural worlds*. Mahwah, NJ: Erlbaum.
- Sackett, G. P., Ruppenthal, G. C., & Gluck, J. (1978). *The creation of a behavioral taxonomy*. In Sackett, G. P. (Ed.), *Observing behavior, volume II: Data collection and analysis methods* (pp. 15-24) Baltimore, MD: University Park Press.

Reliability

- Bakeman, R. M., & Gottman, J. M. (1997, 2nd ed.) Chapter 4. Assessing observer agreement. *Observing interaction: An introduction to sequential analysis*. New York: Cambridge University Press.
- Pellegrini, A. D., Symons, F., & Hoch, J. (2012, 3rd Ed.). Chapter 9. Reliability. *Observing children in their natural worlds: A methodological primer*. New York: Psychology Press.
- Pellegrini, A. D., Symons, F., & Hoch, J. (2012, 3rd Ed.). Chapter 10. Validity. *Observing children in their natural worlds: A methodological primer*. New York: Psychology Press.

Analyzing Observations

- Baltes, M. M., Kindermann, T. A., Reizenzein, R., & Schmid, U. (1987). Further observational data on the behavioral and social world of institutions for the aged. *Psychology and Aging*, 2, 390-403.

- Bakeman, R. M., & Gottman, J. M. (1997, 2nd ed.). Chapter 6. Analyzing sequential data first steps. *Observing interaction: An introduction to sequential analysis*. New York: Cambridge University Press.
- Bakeman, R. M., & Gottman, J. M. (1997, 2nd ed.). Chapter 7. Analyzing event sequences. *Observing interaction: An introduction to sequential analysis*. New York: Cambridge University Press.
- Cairns, R. B., & Green, J. A. (1979). *How to assess personality and social patterns: Ratings or observations?* In R. B. Cairns (Ed.), *The analysis of social interaction: Methods, issues, and illustrations*. Hillsdale, N.J.: Erlbaum.
- Pellegrini, A. D., Symons, F., & Hoch, J. (2012, 3rd Ed.). Chapter 12. Analysis. *Observing children in their natural worlds: A methodological primer*. New York: Psychology Press.