Knowledge, Skills, and Attitudes

for Instructional Designers and Educational Technologists

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https://tinyurl.com/y6d4fgjv

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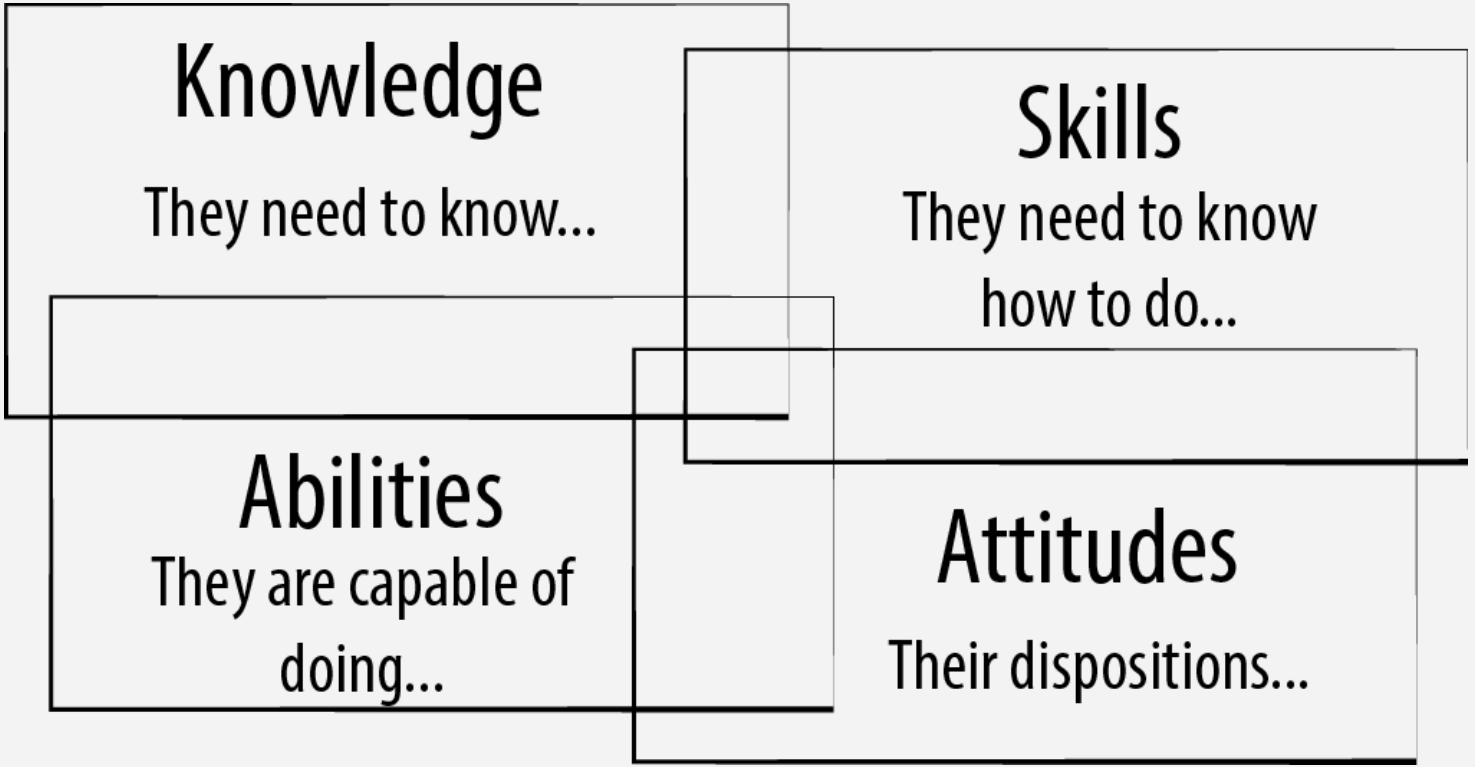
Competencies Defined



INTRODUCTION

Evidence show **misalignment** between employer expectations and academic preparation of ID/ET professionals, indicating the need for on-the-job learning, as well as the incompatibility of some attitudes with the job expectations *(Klein & Kelly, 2018; Ritzhaupt, Martin, & Daniels, 2010; Tracey & Boling, 2014; Leigh and Tracey, 2010)*

What IDers and EdTechs **do**?

What competencies do they need to perform their roles?

Are they the **same** for IDers and EdTechs?

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LITERATURE REVIEW

Many **IDs and EdTechs have experience and skills in both roles**, and institutions sometimes post a position for either an ID or an Edtech when they're actually seeking a person for the role they didn't post (Learning Engineers Inch Toward the Spotlight. Inside Higher Ed, September 26, 2018.)

Competent instructional designers must have specific skills to successfully facilitate learning and to improve the performance of individuals and organizations (Klein & Jun, 2014)

Traditional academic preparation of ID/EdTech often focuses on the theoretical and practical application of learning design and development (e.g., learning theories, adult learning, pedagogy, course design), as well as application of educational technology (Sugar & Luterbach, 2016).

Definitions

EDUCATIONAL TECHNOLOGY

''Educational technology is the study and ethical practice of facilitating **learning and improving performance** by creating, using, and managing appropriate ***technological* processes and resources''** (Januszewski & Molenda 2007, p. 1.)

INSTRUCTIONAL DESIGN

The field of instructional design and technology encompasses the analysis of **learning and performance problems**, and the design, development, implementation, evaluation and management of ***instructional* and non-instructional processes and resources** intended to improve learning and performance in a variety of settings, particularly educational institutions and the workplace (Reiser, 2001).

ID and EdTech Competencies in Literature & Standards

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ID

Cross-cutting/professional competencies: Communication, problem-solving, and interpersonal skills.

Disciplinary competencies: ADDIE, develop assessment, research skills, design for emerging technologies AR/VR (i.e., multimedia production, e-Learning applications/web authoring), LMS admin, web/print design, & programming, design non-instructional solutions.

Kang & Ritzhaupt, 2015; Klein & Jun, 2014; Sugar, 2014; Sugar et al., 2012; Ritzhaupt et al., 2010

EdTech

Cross-cutting/professional competencies: Communication, problem-solving, and interpersonal skills.

Disciplinary competencies: Instructional design, development, and online facilitation. Assessment, evaluation, and teaching techniques, learning theory and human performance technology, software packages ranging from office productivity tools to authoring tools to comprehensive LMS.

Ritzhaupt et al. 2010; Ritzhaupt and Martin 2014; Tennyson 2001; Kang and Ritzhaupt 2015; Tennyson 2001; Brill et al. 2006; Ritzhaupt & Kumar 2015; Ritzhaupt and Martin 2014; Williams van Rooij 2013; Lowenthal et al. 2010; Sugar et al. 2012.

Reid (2018, December 23). *EdTechs and Instructional Designers—What's the Difference?*. EDUCAUSE. https://er.educause.edu/articles/2018/12/edtechs-and-instructional-designers-whats-the-difference#fn4

Methods

Instrument Design & Validation

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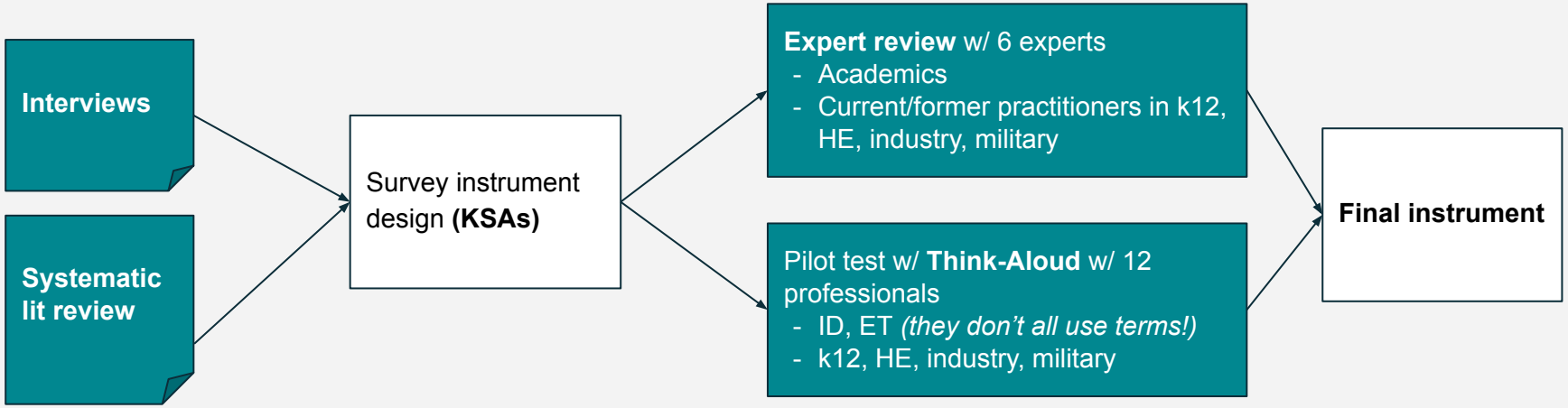

Learn more about the process:
https://qrgo.page.link/Hr5VN

Survey: Competencies Considered…

Knowledge

- ID theories, frameworks, approaches, and taxonomies
- Process models

Skills

- Analysis
- Design
- Product
- Evaluation & Program Eval
- Instruction & Coaching
- Technology
- Professional or “soft” skills
- Working with stakeholders

Attitudes

- Professional attitudes

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Our field is multi-faceted. Below you will find a comprehensive list knowledge, skills, and attitudes (KSAs) that may be used on the job. We recognize that not everyone would be familiar with all the KSAs outside of their industry or sector. Please select **Not familiar,** if you have no prior knowledge about a KSA or are unsure what it means **I do NOT use on my job,** if you have not used this KSA in your current position.

WORKING WITH STAKEHOLDERS

	-	-	How important are the following skills to professionals in **YOUR position**?			
	Not familiar	I do NOT use on my job	Not important	Somewhat important	Important	Critical
Gaining buy-in	☐	☐	○	○	○	○
Trust building	☐	☐	○	○	○	○
Negotiations (e.g., to reach an agreement for a project/initiative, scope, capabilities)	☐	☐	○	○	○	○

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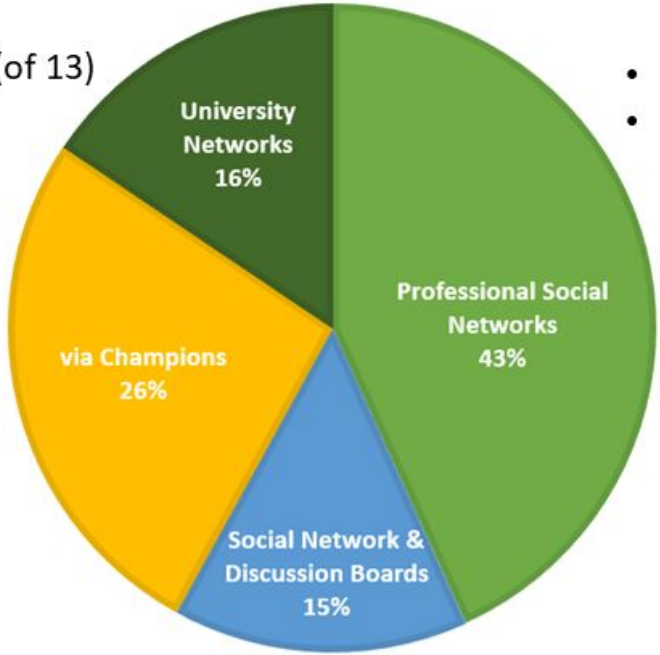
Snowball Sampling

- 4 universities (of 13)



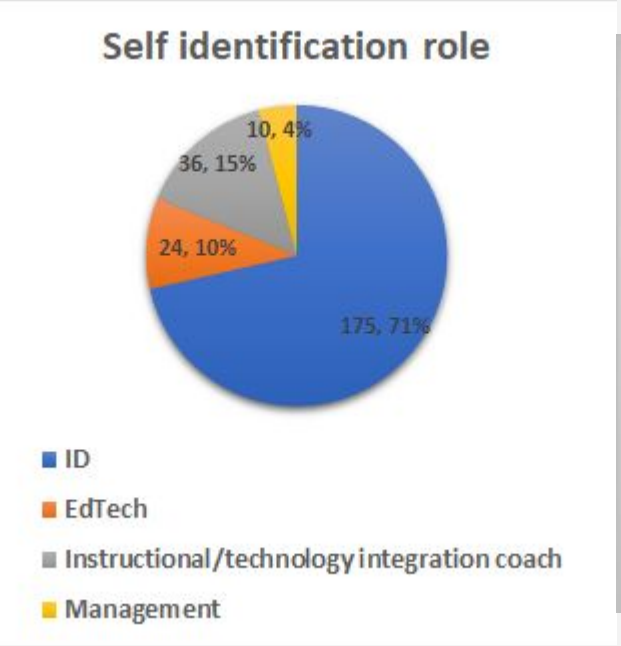
- LinkedIn (incl. personal messages)
- AECT

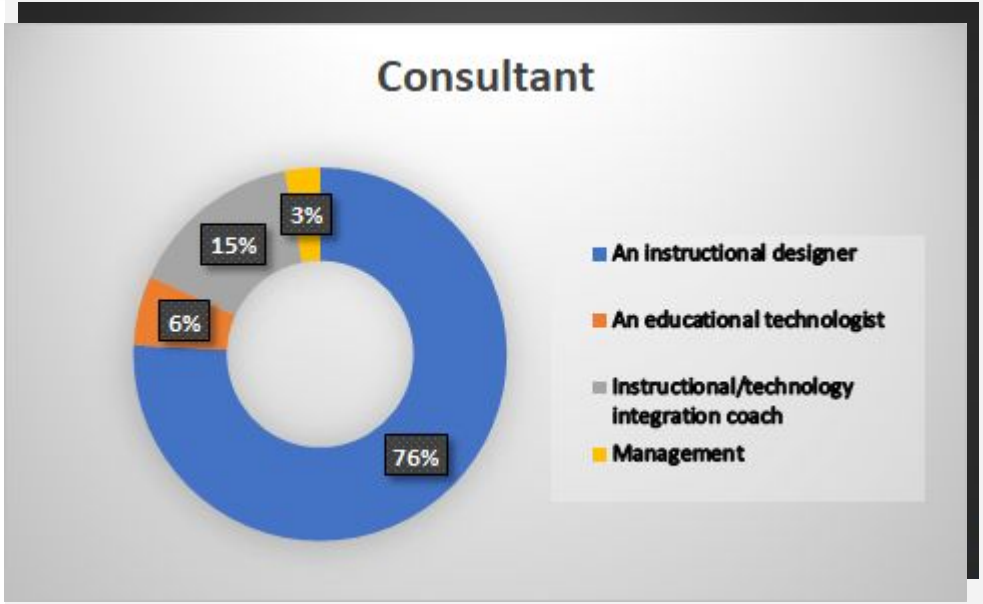
Participants: recruited through a combination of purposeful sampling techniques & snowball (n=245)

- Facebook
- Discussion Board (Canvas)

Demographics

Sample: 245





Do you perceive yourself to be primarily…?

	K-12 *(n=24)*	Higher-Ed *(n=81)*	Industry *(n=50)*	Other* *(n=24)*	Consultant *(n=66)*	*N=245*
An instructional designer	2%	33%	25%	11%	29%	*175*
An educational technologist	21%	38%	21%	4%	17%	*24*
Instructional/technology integration coach	42%	31%	0%	0%	28%	*36*

* Public service/government, military, non-profit, other

Data Analysis

- Descriptive statistics
  - Counts, percentages
  - Cross-tabs

Additional statistical analysis will be conducted for final paper(s), e.g. chi squared, or perhaps cluster analysis to explore participant groupings

Findings & Discussion

Not Familiar with (Select)

I do NOT use on the job... (select)

3

102 (of 245)

RO

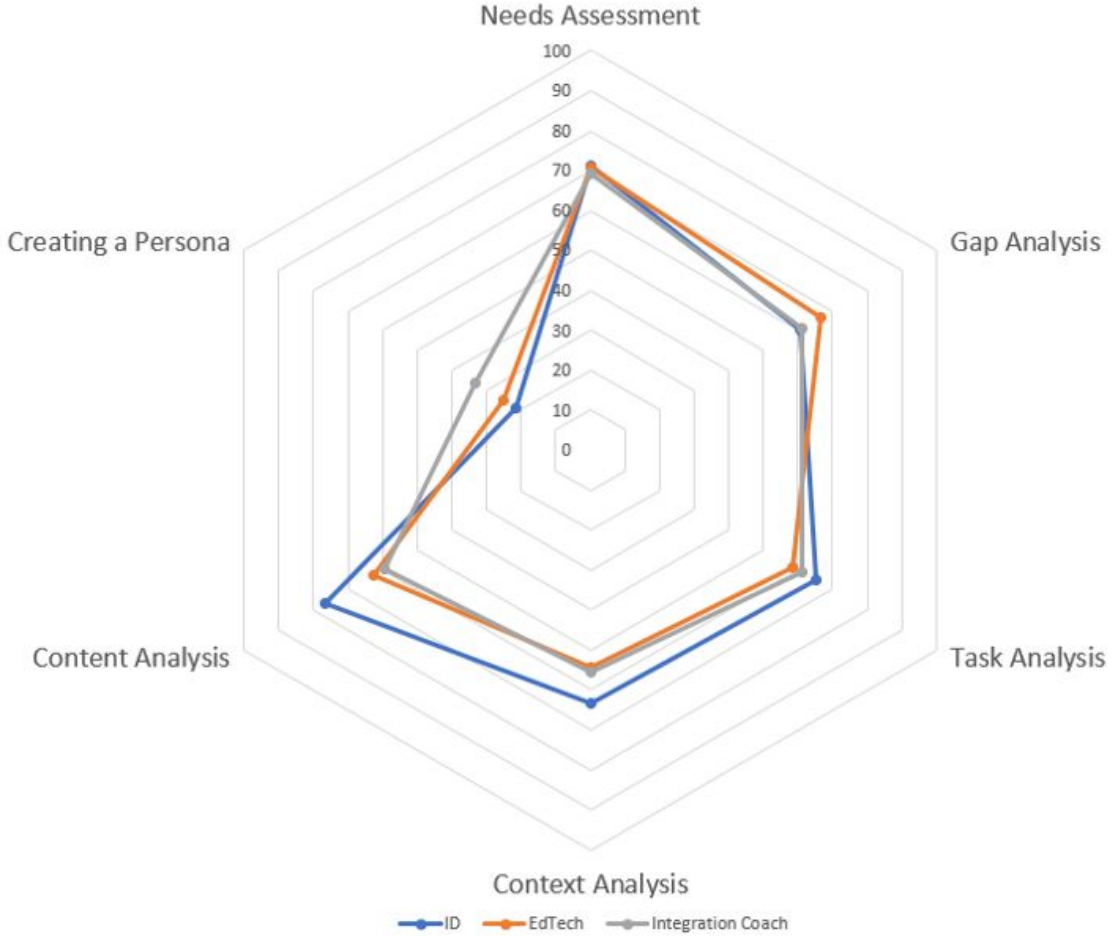
What are the most important competencies?

- **Analysis skills: *none*** reached the 75% mark for critical & important

- **Design skills: *instructional design focus***
  - Focus on writing learning goals and learning objectives, selecting ID strategies, alignment of learning objectives

- **Production skills: *inconsistent***
  - Only development of learning resources and alignment of assessment & objectives topped 75%
  - Authoring tools and technology do not rise to the top

- Evaluation skills: ***none*** reached the 75% mark for critical & important
  - EdTech most likely to perform



Items marked as critical OR important

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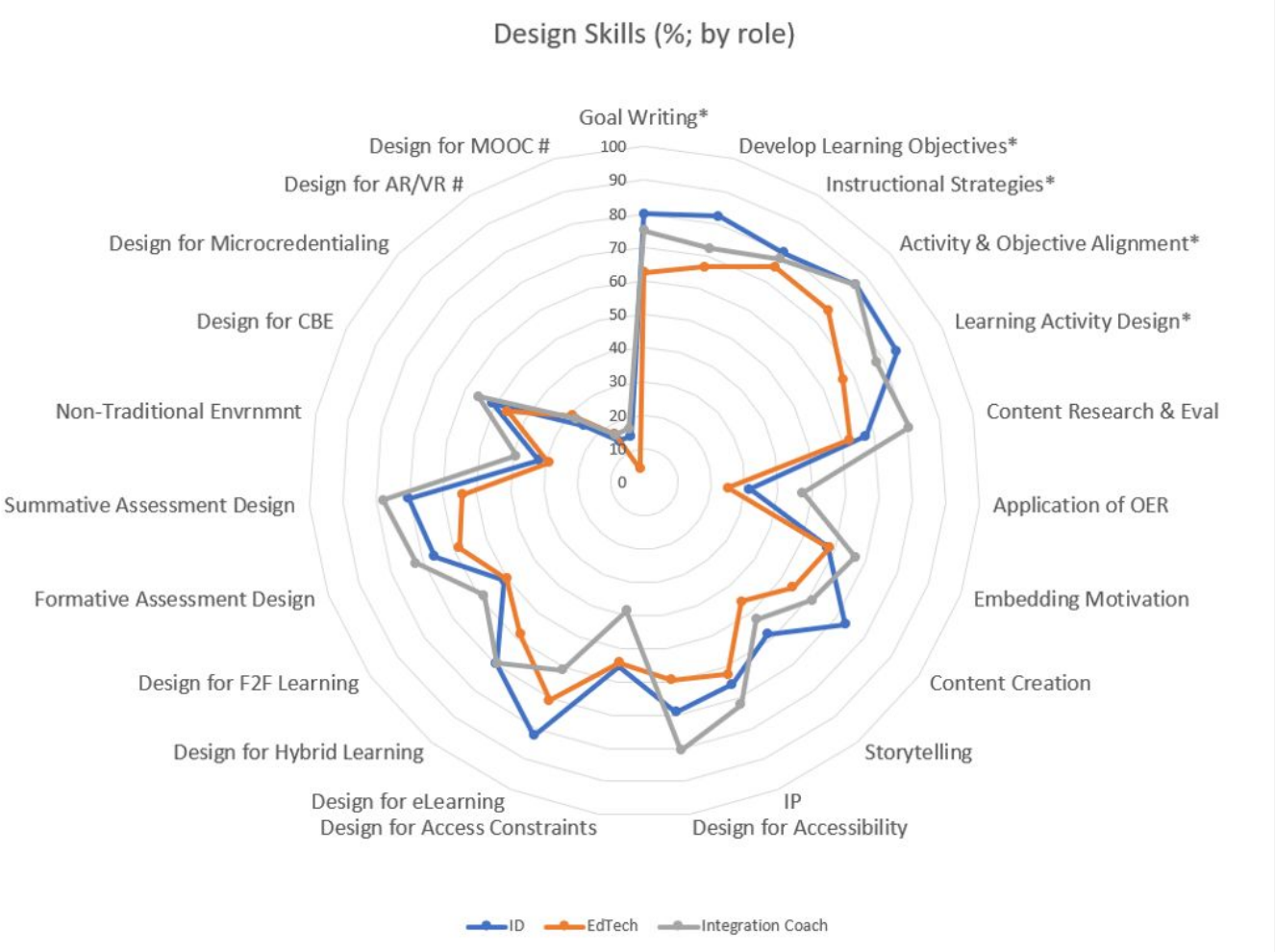
Note:

* - selected by 75%+ across all participants

- selected by less than 25% of all participants



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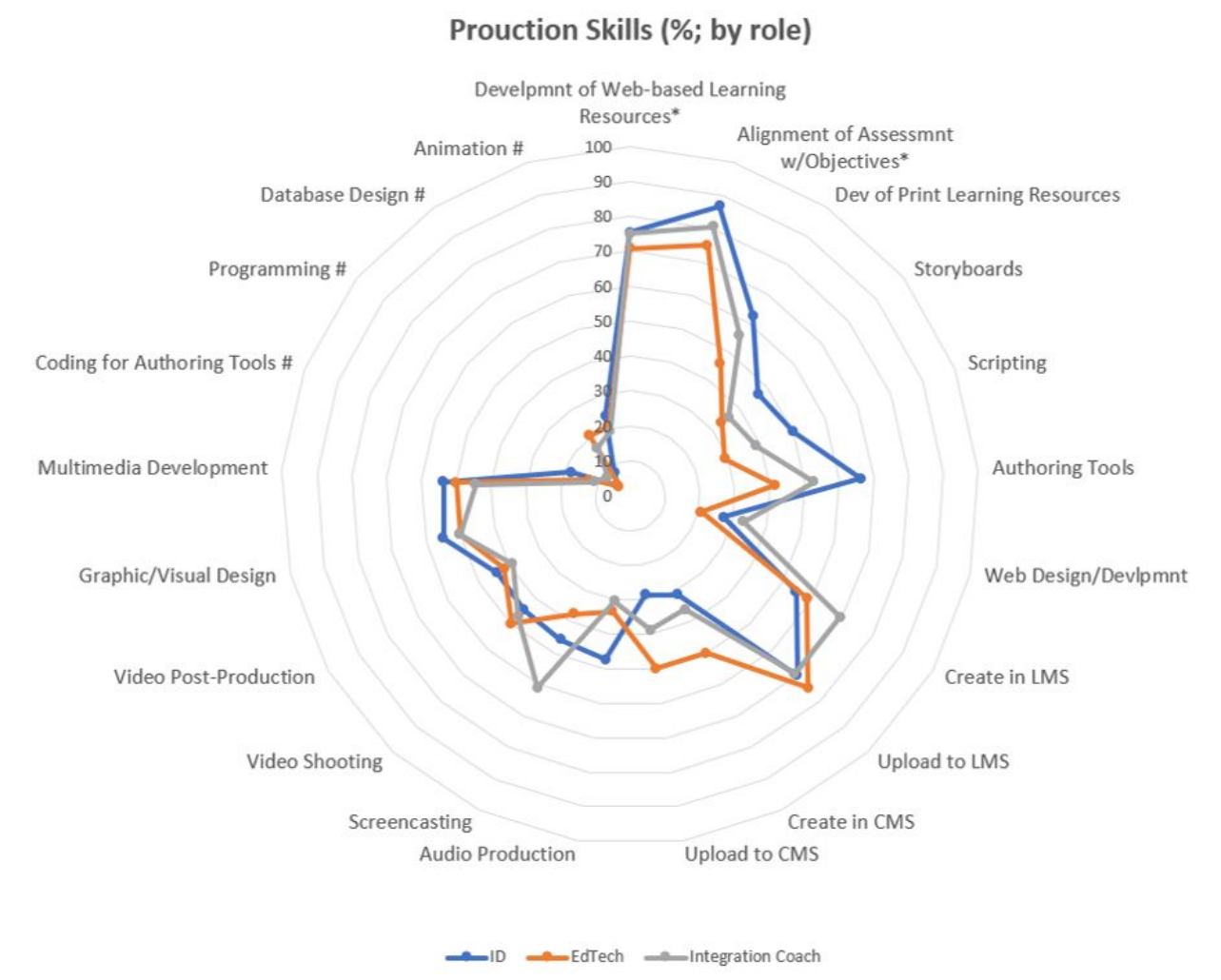

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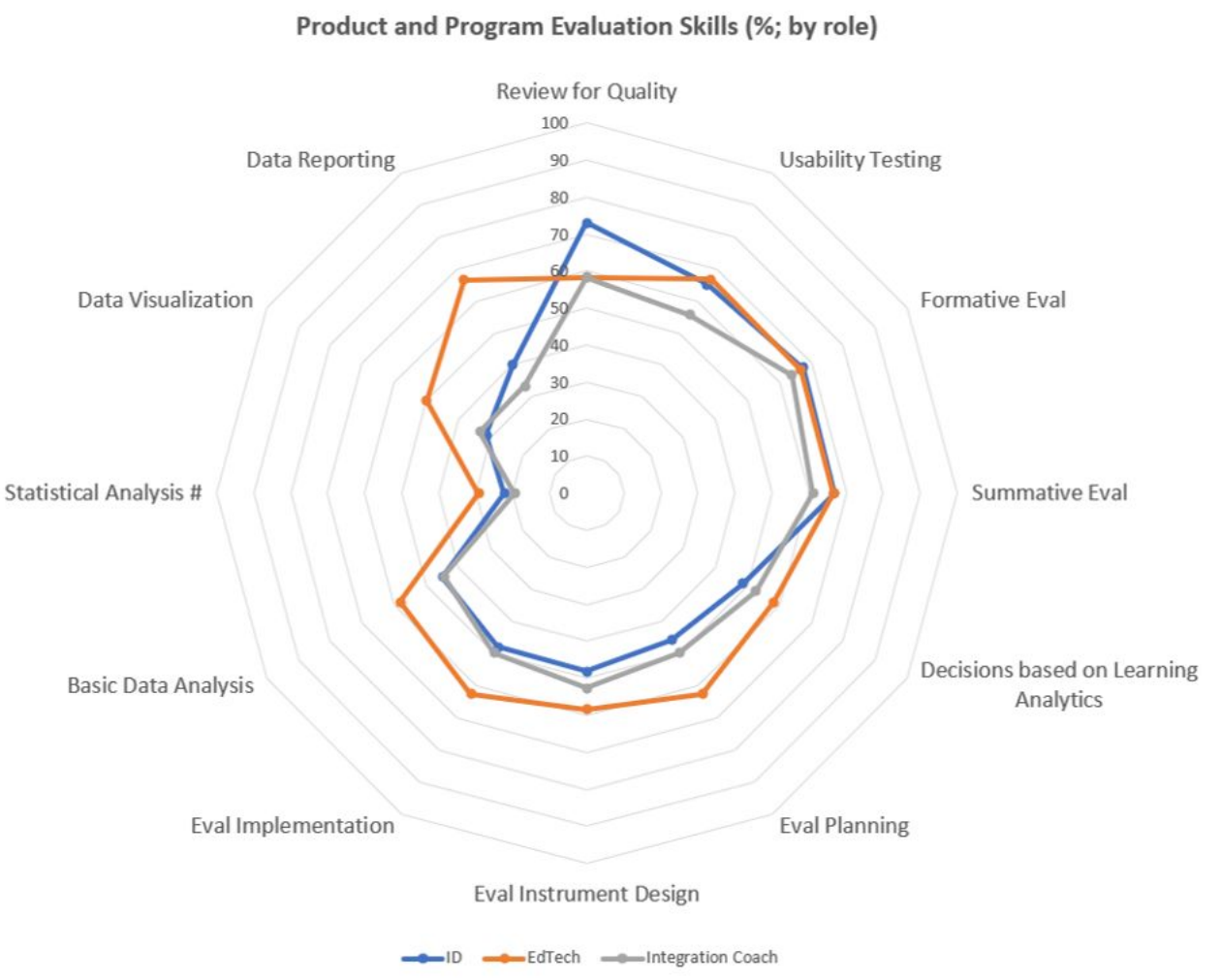

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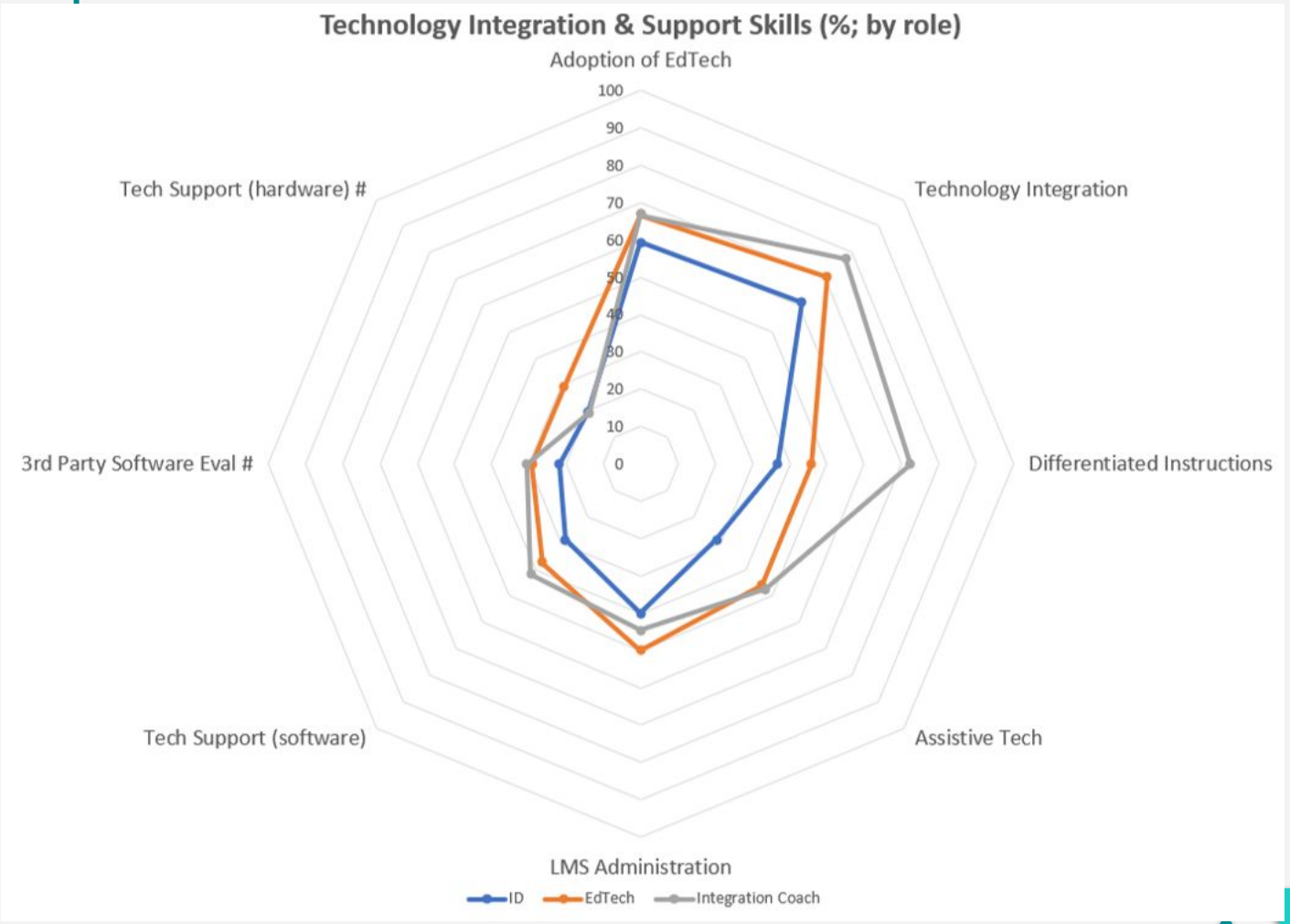
What are the most important competencies?

- **Technology integration: *present in all groups***
  - None rise of 75% critical & important
  - Instructional/Technology coaches are most likely to do differentiated instruction (~75% critical and high), others low



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What are the most important competencies?

- **Professional skills & attitude: *most highly rated items*.**
  - Active listening, creativity, problem solving, time management, verbal communication, written communication, working independently highest rated *(above 75% critical/important)*

- **Working with stakeholders**: ***most highly rated items*.**
  - Gaining buy-in, trust building, negotiations, working with clients, working with SMEs, educating others on the purpose of ID *(above 75% critical/important)*

Items marked as critical OR important

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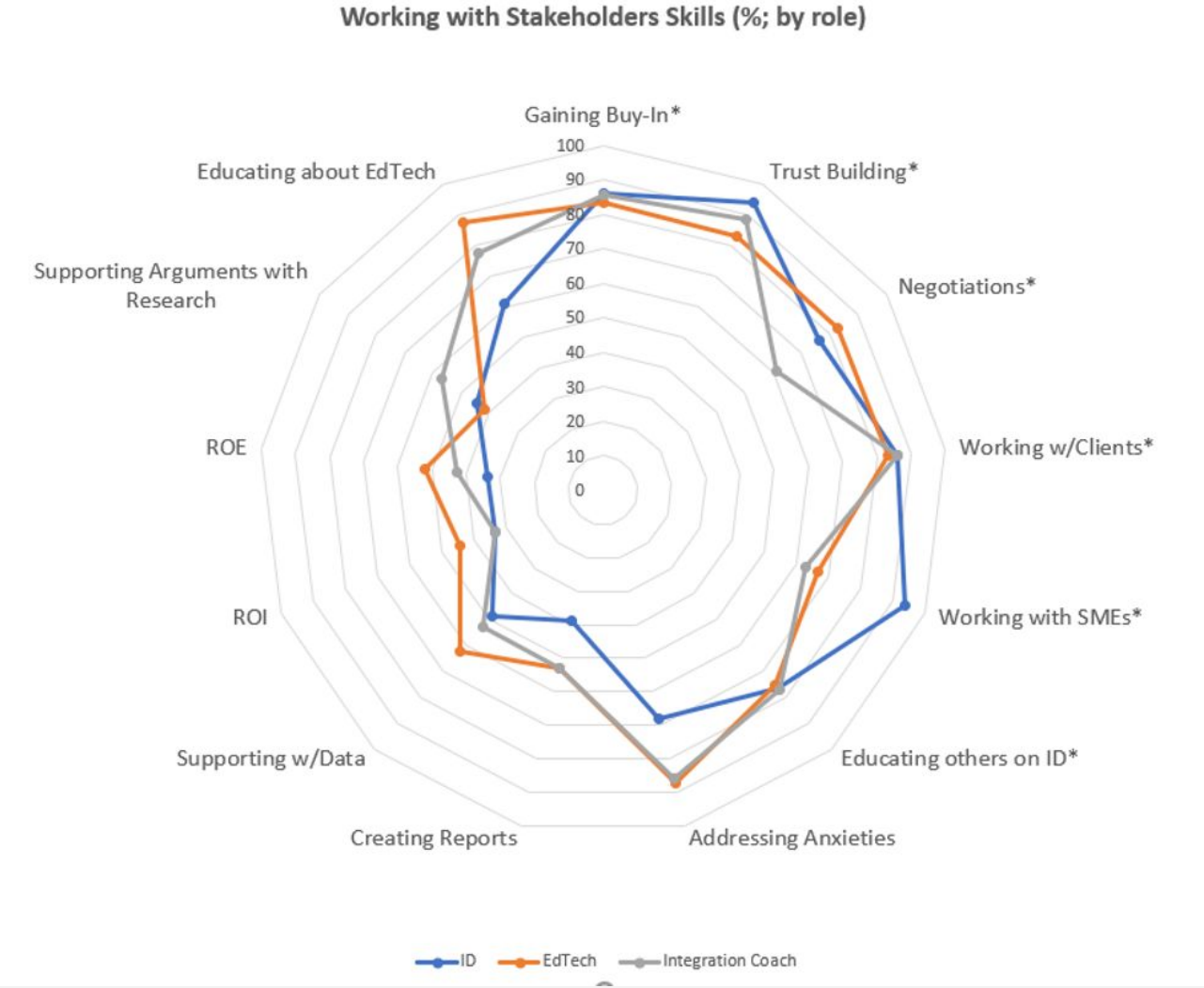

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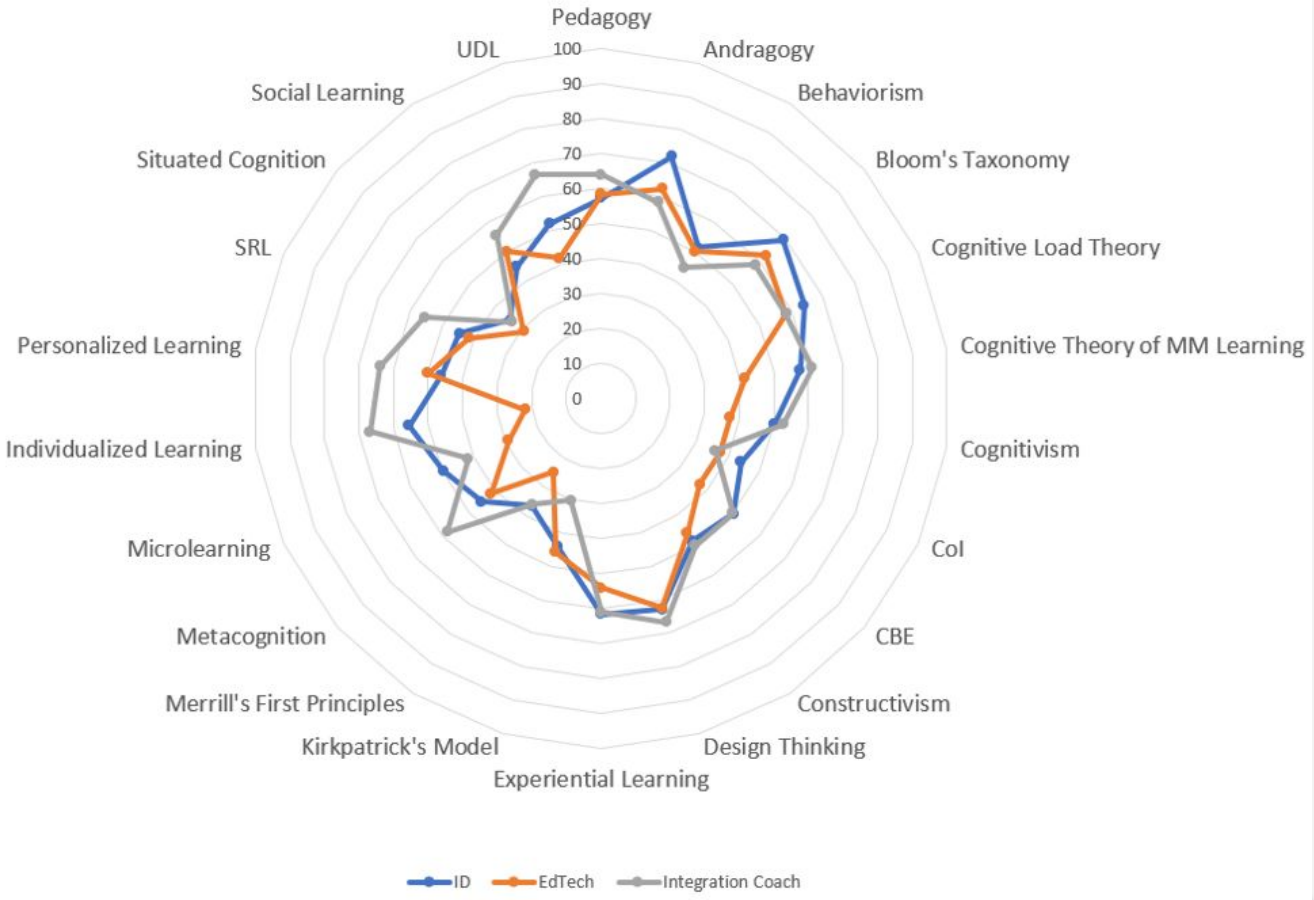
What are the most important competencies?

- **Knowledge: *surprisingly low ratings compared to other groups***
  - ID theory: most items at ~50-60% critical & important
  - ID models: many below 25% critical & important
  - Common to combine and adapt models
  - Surprising number of "not familiar with" *(shown earlier)*

Knowledge: ID Theories, Frameworks, Approaches, and Taxonomies (%; by role)



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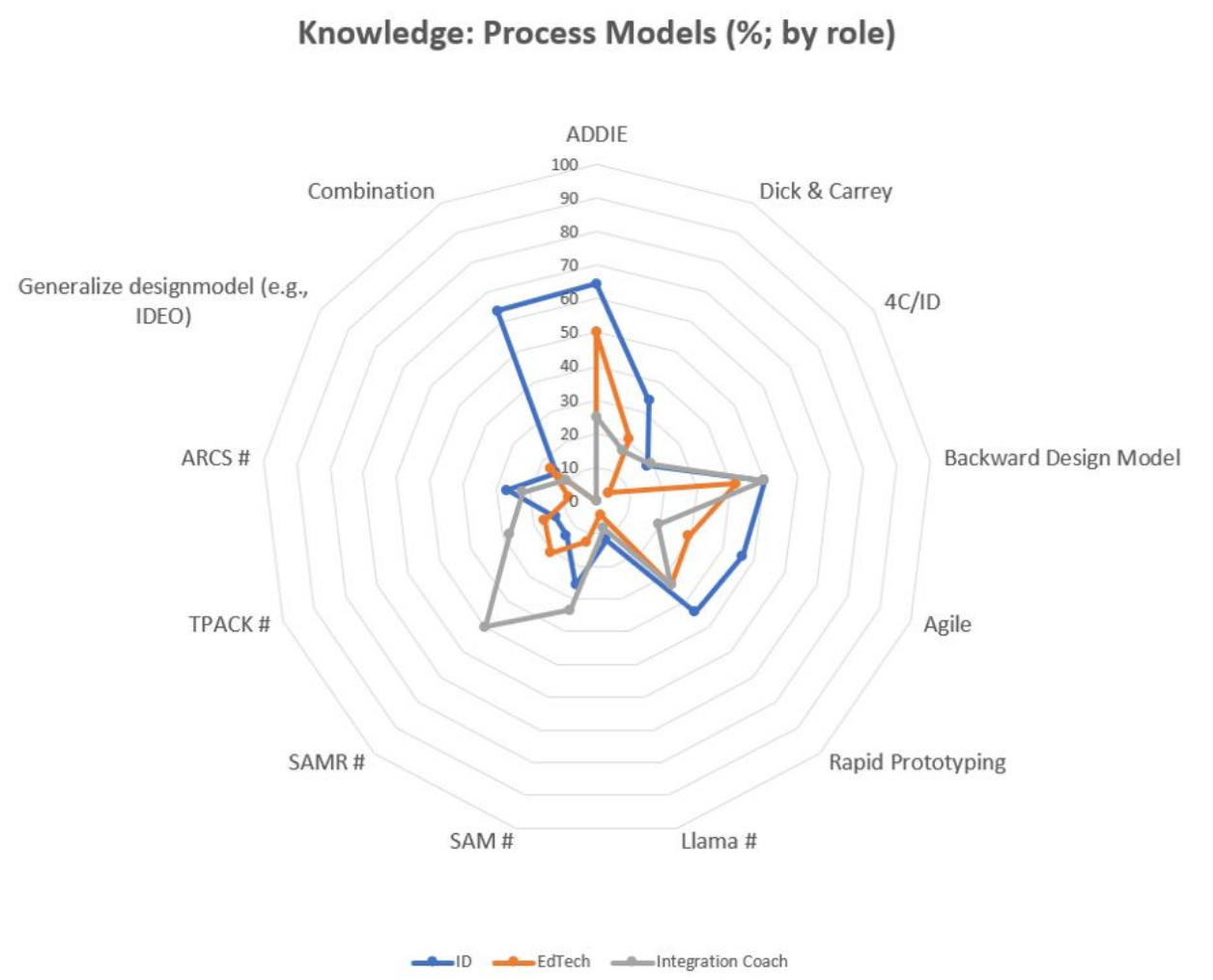

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Implications

Implications for Educators

- **Balance of curriculum:**
  - Do we overemphasize knowledge over skill development?
  - How do we develop professional skills & attitudes?
  - How do we develop skills in working with stakeholders?
  - How do we adjust for findings regarding reality of work in the field *(e.g. ID models - no one "winner" of models, need to learn to mix/match/adapt)*
- **One degree or two?**
  - How different is the competency list for people heading to different roles (ID, EdTech, instructional/technology coach?)
  - How do we talk to students about this (especially when terminology we use does not even match with that used in the field!)

Implications for Researchers & Areas for Future Research

- **Close gap between understandings of academics and professionals**
  - Educator-industry
  - Literature-industry
- **Need more exploration into this area**
  - Larger body of data
  - Look at different perspectives (employers, stakeholders, etc)
  - Remain open to new findings (not just the list we "expect")
  - Observational studies - does what they do match with what they perceive they do?
- **Comparing across groups**
  - K12: EdTech, Instructional Coaches, and others: Are these different names for similar roles? ***-- area for further analysis***
  - How are Instructional Coaches prepared? ***-- area for further analysis***
  - Similarities and differences across sectors ***-- area for further analysis***
- **Explore *how* to balance curriculum & pedagogical approaches** to foster the more difficult to teach professional skills & attitudes

Limitations

- Sampling technique led to over/under-represented in certain sectors and roles
- Lengthy survey → dropout rate, potentially high cognitive load across sections
- Lack of consistency in language use between professionals in different sectors and roles, and between them and us-- piloting to avoid/ameliorate as much as possible
- Difficulty in answering questions about “how important” competencies are (tendency to conflage frequency, personal beliefs about importance, priorities given by employers/clients) -- additional options to ameliorate as much as possibl

Questions?

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