



A comparison of motorcycle instructor candidate selection practices in the United States

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ABSTRACT

Introduction: An essential aspect of motorcycle rider education is how the instructor selection process impacts student learning, sometimes referred to as the human element, as it is a significant factor influencing curriculum success. Student and program achievements are partially contingent on instructors who understand the curriculum and facilitate student learning during instruction. Previous research on motorcycle rider education has emphasized a need for the examination of instructor selection and development, stating that quality education is reliant on instructors who are competent and qualified. **Method:** By applying an exploratory study method, state and military Motorcycle Safety Education Program Managers and Instructor Trainers were examined and compared through telephonic interviews to develop a greater understanding of instructor candidate selection criteria and vetting processes. **Results:** The results suggest that changes in instructor candidate selection systems may improve decisions about a candidate's job and organizational fit. **Conclusions:** Study conclusions indicate that use of multiple and thorough assessments to determine a candidate's motivation, social disposition, and emotional intelligence before preparation courses may better identify candidates and align potential job and organizational fit within the discipline. **Practical Application:** Applications of the findings would include a standardized selection process with improved interviews and pre-course auditing, and candidate expectation management before the selection to attend preparation or certification courses. The efforts potentially decrease long-term costs and deficiencies when candidates have an inconsistent job or organizational fit, departing from organizations after short periods or by not providing consistent quality instruction to students. The study recommendations, when implemented, can improve most educational disciplines where instructors are selected for technical instructional positions where students risk injury or harm.

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1. Introduction

An essential aspect of rider education is how instructor selection impacts student learning, a factor significantly influencing curriculum success (Daniello, Gabler, & Mehta, 2009; Senserrick et al., 2016, 2017). Student and program achievement are dependent on instructors who understand the curriculum and facilitate student learning during formalized instruction. Baldi, Baer, and Cook (2005) seminal research on motorcycle rider education emphasized a need for adequate supervision and training consumable by students, stating the quality is reliant on instructors who are competent and qualified. Moreover, a qualified instructor presents a defining model for students, placing value on increased consciousness, and good judgment while riding motorcycles to reduce risk and prevent harm (Arthur & Doverspike, 2001;

Senserrick et al., 2016). Therefore, this exploratory study used interviews to attain how instructor selection is considered by state program administrators and instructor trainers during candidate selection to inform the rider education discipline.

1.1. Problem

A problem in formal motorcycle rider education is the thoughtful selection of instructor candidates who demonstrate a good job and organizational fit to support the quality delivery of well researched and effective curricula in training programs. Kardamanidis, Martiniuk, Ivers, Stevenson, and Thistlethwaite (2010) recommend the need for more rider education research based on previous methodological weaknesses. Baldi et al. (2005) note there is a sizeable gap in knowledge about the impact of instructors who are selected as a critical mechanism to facilitate

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student learning, potentially decreasing crashes (Daniello et al., 2009; Horswill, 2016; Senserrick et al., 2016).

1.2. Context and literature review

Studies on motorcycle rider education effectiveness have historically used motorcycle crash data in correlation with vehicle miles driven as a primary measure of efficacy. In doing so, researchers do not define the various factors, including instructor quality, which influence the delivery and retention of course content. Rarely considered in analysis is whether the rider received any rider education at all, measuring the possible effects of inappropriate judgment and behavior, no educational exposure, or poor knowledge transfer during a rider education course (Aupetit, Riff, Buttelli, & Espie, 2013; Haworth & Mulvihill, 2005).

As in all modes of safety instruction, it is challenging to research and document non-events or events of lesser severity caused by the effects of proper education. These events are sometimes referred to as lead events, as discussed by Loosemore, Raftery, Reilly, and Higgon (2006) as opposed to the lag events currently used to measure crash causation. While collecting evidence is considered problematic, an assumption in rider education is accidents and fatalities do decrease with proper education, although to what extent is unknown (NHTSA, 2009). Regardless, without an exploration of instructor candidate selection, meaningful consideration of instructors as a catalyst for knowledge transfer remains a gap in understanding efforts to improve rider education instruction as a prophylactic countermeasure to motorcycle crashes.

Daniello et al. (2009) advise the wrong instructor can lead to ineffectiveness for formal education. Supporting this in a study on teacher self-efficacy, Feldstein (2017) submits the effectiveness of quality teachers, improves the instruction, improves student achievement, and reduces teacher shortages. While measuring effectiveness is problematic, it is equally challenging measuring positive outcomes when an instructor with the wrong fit or quality employs a curriculum improperly.

Saskia de Craen (personal communication, June 12, 2018), a senior researcher at Stichting Wetenschappelijk Onderzoek Verkeersveiligheid (SWOV), The Netherlands Institute for Road Safety Research, explained that the quality of instructor is a crucial element for successful motorcycle rider training. Moreover, research on young driver training viewing identical curricula at different sites showed a negative impact by instructors who did not display job fit or trust in an organization or the curriculum's educational methods. By not preparing to give the course wholeheartedly, using the curriculum as intended or designed, the student outcomes became negatively impacted (de Craen, Vissers, Houtenbos, & Twisk, 2005).

Instructor competence is an essential cornerstone of any driver education, as described by Gregersen (2005). The knowledge to employ curricular lesson plans is necessary for creating a situation where instructors must not only understand the content but be able to explain most aspects of what the student should know and why that information is crucial. Moreover, quality instructors display the skill of pedagogical self-efficacy, best defined by a person's belief about being able to complete a specific task as described by Uhl-Bien, Schermerhorn, and Osborn (2014). Qualified and knowledgeable instructors use whatever tool is necessary to help individual students incorporate curricular material into their long-term memory and behavioral actions for continual use (Bandura, 1997; Danielson, 2007; Feldstein, 2017).

Guidance on instructor selection from the U.S. National Highway Traffic Safety Administration (NHTSA, 2014) recommends a national standard that includes qualification criteria, which are purposefully vague and flexible to accommodate the many different programs and curricula choices. However, state programs use

the NHTSA recommended criteria for instructor selection in a manner that may have little to do with an instructor's ability to use pedagogical methods for relaying content. The recommendations may focus more on social compliance criteria than an ability to share information on wide-ranging topics and interacting well with others. As a result, Haworth and Mulvihill (2005) submit the matters associated with rider judgment, assessing risk, and developing motor skills are delivered differently from place to place, often affecting the curricular intent and the safe operation of motorcycles.

Another cogent problem is instructor quality and the impact on rider education to employ focused curriculum components effectively to individual students. Instructor ability necessitates consistency with an educational method to successfully facilitate student learning in an accelerated manner without losing a group or individual's attention (Akhmetova, Kim, & Harnisch, 2014; Senserrick et al., 2016, 2017). An instructor is a conduit for successful knowledge transfer between curriculum and students; an inappropriate or off-topic emphasis by the instructor may well affect the retention of desired course content. When an instructor does not have the knowledge or ability to present the curricular material as intended, the student may leave with a piece of limited knowledge or worse – an inappropriate understanding of the content (Bandura, 1997; Senserrick et al., 2016, 2017). Dewey, 2015 made an essential clarification to this point when he explained that experience and education are not synonymous; not all experience is educational, and inappropriate experiences are counterproductive.

1.3. Purpose

Beyond the sphere of instructor influence, the novice rider course has historically been the main opportunity for formal education to enhance rider survivability since graduated motorcycle licensing or tiered training is not consistently used with motorcycling in the United States. Instructor selection and appropriate use of pedagogy then become the main factors for student learning and skill development provided during the educational process.

Haworth and Mulvihill (2005) describe the emphasis on motorcycle roadcraft control as a skill essential for students, yet also suggest other behavioral aspects of rider education emphasized haphazardly or not enough. Many consider judgment and risk management underrepresented in the teaching of course content (Aupetit et al., 2013; Dorn & Brown, 2003; Dorn, 2005; Rowden, Watson, & Haworth, 2012; Vidotto, Tagliabue, & Tira, 2015). The connection between content and sustainable knowledge transfer in rider education resides with a competent instructor able to analyze the learning environment and provide the appropriate direction to a student (Bandura, 1997; Danielson, 2007; Feldstein, 2017).

In a study by Bramley et al. (2018), a parallel is formed with Motor Learning Principles (MLPs) of Physical Therapy students in Canada. Findings suggest a knowledge-practice gap from programs where student learning is not fully supportive of the needs of a student MLP needs, focusing more on the neurological curriculum. If instructors do not understand or teach all relevant material, the student will focus mostly on what the instructor determines is most relevant. In rider education, MLPs are important and emphasized excessively; however, behavior and rider judgment are equally as important and typically accentuated less despite experts in traffic safety believing it is the primary cause for crashes (Breakwell, 2014; Dorn, 2005; Evans & Schwing, 1985; Evans, 1991, 2004).

Person organizational fit is desirable in teaching endeavors, and behavior specialists Uhl-Bien et al. (2014) suggest the combination of values, behaviors, and interests match well with the culture and professional requirements of an organization. An instructor with

poor organizational fit can undermine the value of the culture and curricular material. Uhl-Bien et al. (2014) also define employee job fit as the interests, skills, and characteristics necessary to deliver the requirements associated with a position. If the improper instructor is selected, it may be considered antithetical to quality rider education. Either issue of fit could potentially endanger the well-being, health, and safety of students. Both organizational and job fit also relate to the competence of instructors, which helps to define what is considered a good employee or instructor fit. Oliveira (2015) describes employee [instructor] fit best as consistent with what the selector knows are the characteristics and attributes needed for the job and organization, as evidenced by a manager's extensive experience.

Although research on the efficacy of driver/rider education continues to produce mixed results, as previously stated, inquiries cite the variables of instructor impact as the topic leaving a gap in understanding (Aupetit et al., 2013; Baldi et al., 2005; Tagliabue, Gianfranchi, & Sarlo, 2017). A universal assumption is that a more knowledgeable motorcyclist can make better riding decisions. Quality entry-level motorcycle rider curriculum contains well-researched life-saving information, but the accurate relay of the lesson plans are contingent on instructors having the appropriate skills, characteristics, attributes, values, behaviors, and interests for facilitating knowledge transfer. Additionally, the instructor must match well with the culture and environment of the organization, modeling appropriate and safe riding behaviors as role models for students, demonstrating the need for a quality selection process to identify good candidate fit.

Before the risk of life or limb becomes a consequence of instructor guidance, programs that accurately assesses candidate fit could enhance the future educational process, improving preparation and certification course outcomes making the findings of this research beneficial.

1.4. Research questions

In the examination of the significant issues, three questions guided the qualitative interviews:

RQ1: How do motorcycle education program administrators and instructor trainers describe the criteria and vetting processes used to identify potential instructor candidates?

RQ2: How do motorcycle education program administrators and instructor trainers describe the quality characteristics and attributes of candidates?

RQ3: How do motorcycle education program administrators and instructor trainers describe the measure of candidates at the completion of the selection process?

The research questions provided an exploratory line of inquiry for understanding instructor candidate selection in motorcycle rider education in the United States. The results of this study establish a foundational perspective for future studies in rider education and other educational disciplines where instructors are integral to program and student success.

2. Method

An exploratory research method offered a more in-depth understanding of the views belonging to the more experienced and most informed program managers and instructor trainers in the profession. A 30-minute telephonic semi-structured interview used probing open-ended queries to answer the three research questions. By analyzing the thoughts and perceptions of multiple managers and trainers, the intent was to compare insights of the sample on the selection processes to identify useful selection models.

The transcribed interviews were verified by participants to ensure accuracy and trustworthiness through member checking. The sample was analyzed multiple times manually and by using NVIVO software to obtain a thematic sense of the information. Text segments were identified, annotated, and then divided into codes and end themes developed through the collective grouping of terms. In the absence of one exemplar candidate selection model to extract from the interviews, the information developed into a list of individual practices best reflected by administrators and trainers, further confirmed and supported by contemporary organizational behavior and human resource literature.

2.1. Participants

Recruiting of study participants was accomplished through emails garnered through state government agencies and public announcements on formal and informal social media websites. Limitations included program managers and instructor trainers between 30 and 65 years of age, with at least five years of motorcycle instructor trainer experience. Those who replied signed consent documents, verified they met the inclusion criteria, scheduled meetings, and participated in telephonic interviews. A total of 13 volunteer respondents were vetted and met the criteria included in the research, differentiated as eight Instructor Trainers (IT) and five Program Managers (PM) in the final sample.

Of the potential 60 possible administrators from 50 states, five military programs, and five independent organizational PMs in the United States, 20 administrators validated to have met the research inclusion criteria, with five opting to participate in the study. It is a particularly interesting note that two-thirds of the PMs have little or no experience instructing motorcycle rider education and-or have limited exposure to the necessary characteristics and attributes for instructing riders or for training instructors to instruct riders. Each of the 60 contacted PMs are monetarily compensated by government or motorcycle related entities for their positions to make competent decisions impacting instructor selection, ensuring the success of motorcycle rider education programs.

184 ITs received direct contact emails in the known IT population of over 214 trainers. Nine accepted invitations and did not follow through, 12 declined for various other reasons, and eight consented to participate. It is difficult to determine the activity and status of all ITs since personal data are maintained following personal privacy rules making them publicly inaccessible in many cases. Pay is also a variable difficult to determine based on multiple program structures but is generally attributable to the amount of work and geographical location of the organization having oversight. ITs serve the directed needs of sponsor organizations adjusting mostly for population density and geographical dispersion at two to five per organization or program. Some contactable ITs did not meet selection criteria, either with too little experience or presented as older than the IT selection criteria. One limitation based on research criteria highlighted the many ITs serving in the trade beyond the age of 65. Future studies should account for the possibility ITs serving well beyond typical United States retirement age.

The average age of participants in this research was 58 years, with the youngest being 39 years and the oldest 65 years of age. Based on the selection criteria, experience averaged 23 years with the least being nine years, and the most 37 years. Collectively, experience in Motorcycle Rider's Education was 301 years. Represented within the participants were two distinct curriculums, representatives from three distinct industry manufacturers, and trainers with experiences from 24 different states.

3. Results

The interview transcripts were analyzed by the researcher to develop themes providing an understanding of the participants' perceptions. The themes were determined primarily by the three research questions aligning with RQ1: instructor candidate selection and vetting process, RQ2: characteristics and attributes of instructor candidates, and RQ3: measure of candidates after the selection process (pre-certification). The noted representative comments exemplify the collective respondents' views, using the pseudonyms of Program Manager (PM##) and Instructor Trainer (IT##) to differentiate the multiple participants in their own words.

RQ1: Candidate selection and vetting processes

Qualitative interviews of State Motorcycle Safety Education PMs and ITs provided an understanding of instructor candidate selection criteria and vetting processes. A broad range of answers and methodologies signified the use of the consistent, yet minimal guidance proposed by [NHTSA \(2014\)](#). One state program administrator expressed:

"My role in [candidate] selection in the state is very much one of leadership...The state accepts applications for any and all wishing to teach... All applications are routed through my office. Myself, [with] the support of my administrative team, we first vet the application to make sure the candidate at a minimum, passes the requirements set forth in the state program rules" (PM01, 2019).

In states without formal programs, ITs may act on behalf of private sites, the motorcycle industry, or U.S. military sites to handle the screening process. Three of five program managers and one in eight instructor trainers spoke of formal written standards for candidate recruitment and selection. Typically, programs use or build upon [NHTSA \(2014\)](#) written recommendations and curricular material:

"The state has no requirements at all... [industry company] actually has no requirements other than they recommend [instructor] candidates are interviewed, and they meet some loose recommendations for a source of the candidates...but they make no recommendations beyond that. I do interview them [candidates], and it largely is based on [my] experience for having poorly selected candidates in the past. I've gradually learned what things I need to look for. In things actually than look for, things to listen for" (IT01, 2019).

All respondents discussed interviews citing at least a short phone conversation by state PMs or ITs. In other cases, informal collective information sessions or levels of interviews with multiple program team members was the policy. The candidate interview process was most commonly handled informally and inconsistently through day-to-day interactions, with some research participants questioning how useful they were.

Typical vetting questions were about general topics like "why do you want to become an instructor?" While others used information from written or electronic applications to discuss the applicant's motivations through probing, open-ended questions. More structured programs used multiple interviews by PMs, ITs, instructors, site providers, or site managers to develop stronger profiles of their candidates. While in at least some less structured programs, individuals were accepted merely upon meeting the NHTSA recommendations:

"I wouldn't call it really a formal interview process. The requirements we have are, they're not super heavy... it's very rare that anybody does not qualify for the basic things, so we've never, I've never really done any one-on-one [interviews]... we've

never called candidates in for a face to face interview... there's nothing else that we can do to eliminate a candidate. We have to go by the letter of [the] regulation" (PM04, 2019).

"I contact every one of those folks who are interested in becoming instructors, I interview them. We spend quite a bit of time on the phone...once referred to the [training] site and the site decides to sponsor that instructor candidate... I'll have a second interview with them" (PM05, 2019).

"It's almost a warm body theory out there to get them in the front door, and then you try to weed out who may not be the best candidate [during the instructor preparation course]" (IT02, 2019).

"We joke about if you can fog a mirror, you can do that [be a candidate]" (IT04, 2019).

"I get the honest impression that 99 percent of it was, in the beginning, a good ole boy type of thing...the only real interviews that you got was what we did during the [instructor preparation course]" (IT08, 2019).

In some programs to explain the job requirements and expectations involved in being an instructor, information sessions or discussions informed candidates of the position. In some cases, PMs and ITs used the opportunity to discourage less motivated candidates by exposing the less glamorous side of the profession:

"We are sometimes, to our own detriment, ...dissuade anyone from actually carrying forward... We remind them that it does require a lot of upfront preparation, there is a financial investment, ...as well as a considerable time investment... it's not a lucrative profession, but rather one that is very gratifying emotionally" (PM04, 2019).

"I am upfront and honest [to candidates] about what I think [their] liability might be" (PM01, 2019).

"I make sure that they understand how much time they're committing and how it's going to affect them. Not only during the training program, but during the off days when they go home, and they've been working for 10 days in a row... between their personal jobs and this training just to see if they're willing to make some of those sacrifices. I will state to everyone how labor-intensive it is. I explain early on the time commitment" (IT06, 2019).

Some respondents discussed vetting a candidate through action as a method to assess the candidate's interest. If the candidate volunteered to observe or participate in courses as range aides before selection, they reasoned the candidate showed motivation, interest, and an inherent desire to be an instructor:

"[Candidates] complete an online application. So that initiates the process...our applicant liaison will contact that person to set up a time to talk to them on the phone...signing [candidates] up for their audit assignment...[candidates] do their audit assignment out in the field, the instructors that they audit also evaluate the applicant...after the audit is complete when we have evaluation forms, and they're on assignment, then the training manager determines whether or not they're going to interview the candidate" (PM02, 2019).

"Prior to them actually getting to [the] training they are encouraged to actually get out and interact with some of our team in a class environment. Observing and interacting with other instructors. So, that tends to give us some insight... a lot of it is just gut impression during the interview process" (IT03, 2019).

The term most often used for this type of vetting was "auditing" a course as a student or range aide, to further develop an understanding of the requirements as an instructor. The task helped to vet those who were interested, potentially dissuading some candi-

dates, yet identifying their desire and willingness to participate in the educational process. In some programs, the audit requirement is outlined in policy documents and expected of all candidates, whereas other programs merely suggest participation as a recommended way to prepare. Some programs did not have an audit process at all.

RQ2: Characteristics and attributes for candidates

Respondents used similar terms when describing the features and qualities of potential candidates. Although not always articulated concisely, the construct of Emotional Intelligence (EI), defined as the ability to manage oneself and one's relationships with others, was mentioned in varying ways by all respondents (Goleman, 2005; Mortiboys, 2011; Uhl-Bien et al., 2014). A high level of EI is considered an active component in being able to facilitate learning by creating bridges of understanding and using empathy as a tool to interact with others in adult learning:

"The qualities that we look for, having the soft skills, people skills, to interact with students and represent the program in a positive light. You know, the kind of intangible things like integrity, honesty, and just being able to generally interact well with others..."(PM03, 2019).

"I want a role model both, I want a boy scout or a girl scout. I want someone who has impeccable character, patience, and who can be a mentor to our students the same way the quality assurance specialist is a mentor to the [instructors]" (PM05, 2019).

"Within the first five minutes, gauging their experience as far as teaching, mentoring, coaching, identifying the self-motivation, seeing where all that sits. ...see if you can get emotional intelligence out of it, and that's you know, a conversation with them about things to see what their emotional intelligence is" (IT02, 2019).

Also mentioned, was the ability for potential candidates to be life-long learners capable and willing to seek new knowledge and continued growth as an individual and educator:

"You can kind of get a general idea, is this something [they're] interested in? Do they have a positive attitude toward the whole thing? Their attitude and motivation [are] a big part, you know their willingness to come out and learn. ...what extra work can they do to make them a better instructor down the road" (PM03, 2019)?

"I listen for enthusiasm, I listen for curiosity, I listen for willingness to learn. ...how readily they will reconsider a position based on something they've seen or something they've been told. ...I look for flexibility" (IT01, 2019).

All respondents suggested that motorcycle riding skills and knowledge were necessary for being an instructor, but also acknowledged that they were secondary to high EI. Some respondents mentioned a necessity for candidates to have observation skills and provide proper guidance to students as highly desired characteristics and attributes of a model candidate.

RQ3: Measure of candidates at the completion of selection

Varying degrees of selection activities affect the determination of employability at the end of the candidate selection. Some programs use more thorough processes to vet potential candidates, while others by policy or choice, allow anyone who aspires to be an instructor to go directly to the instructor preparation course where formal certification uses a pedagogical vetting process. After the selection process, participant's expressions were consistent with the characteristics and abilities section of the study, even for those not having a selection and vetting process going beyond the NHTSA recommendations for instructor selection. Again, NHTSA recommendations have little to do with candidate quality

or the ability to use pedagogical methods for delivering course content.

"Selection is hard...It's choosing the right people. There is a qualitative factor. ...the team perspective and if the group believes that this candidate is strong...we follow the group mentality. ...someone who is seeking a job will say what they think you want to hear to get the job. So, the trick of it is to kind of listen to what's not being said. ... it's an art and skill" (PM04, 2019).

"[I want] an emotional commitment to both the training program, riding, riding safety in general, and to the team [before sending to prep]" (IT03, 2019).

"So that's what I am talking about fit, somebody that's totally up-front and honest with you right off the get-go and they are who they say they are. Motivation and desire...to do that type of work...to be that help agent, to help somebody reach their goals" (IT05, 2019).

"...to clarify, we don't ever compromise the end goal or the end of completion requirements, but we will keep weaker candidates through the training process when we have low numbers" (IT06, 2019).

The responses from participants provided an initial understanding of instructor candidate-job and organizational fit perceptions in the motorcycle education community. Once again, as discussed by Oliveira (2015), the manager's extensive experience is key to recognizing the characteristics and attributes necessary for a job and organizational fit. What was not definitively expressed by participants was a true measure of what a quality candidate should be, potentially opening the selection process to mismatches in personnel to a job and organizational fit.

4. Discussion

With the varying sizes of programs and differing regulatory or policy constraints among the states, it is difficult to use a one-size-fits-all approach for candidate selection. There are, however, best practices that, when implemented, show promise in selecting better candidates who are more suitable to represent program goals. The results identified areas of significant emphasis for improvement, given programmatic implementation of known best practices. Areas include: (a) enhanced recruiting efforts, (b) conducting multiple interviews with multiple team members, (c) more robust screening activities like auditing of courses for candidates, (d) comprehensive assessment of candidate EI, (e) detailed documentation of processes, and (f) further research within the field to fully measure selection outcomes.

The study results highlighted differences of opinion and knowledge between PMs and ITs where answers were incongruent regarding how screening processes were employed and the degree of success. Specifically, the use of selection interviews was a point of contention for ITs not thoroughly included in candidate selection vetting activities with PMs before certification courses. Written policies or requirements, often considered as common knowledge in the field, may not have been effectively documented or communicated to organizational levels below that of PMs, creating potential tensions. A strong recommendation is for programs to verify and detail all processes thoroughly, distribute the findings widely to prevent knowledge silos, ensure all personnel can understand the program's intent, and facilitate consistent usage and similar language by teams (Hannon, Hocking, Legge, & Lugg, 2018). Lemke (1995) supports the assertion by recommending well designed and implemented plans of induction raise retention rates from 50% to 85%.

The most thorough vetting systems included written or online applications as part of or immediately after recruitment. After recruitment, multiple levels of formal and informal interviews, requisite audits, evaluations, and preliminary written assignments display the potential of candidate efforts before preparation or certification courses. The least restrictive programs relied wholly on curriculum preparation and certification courses using assessment and qualitative selection criteria embedded in a minimal and often time-constrained process. By having a more robust system of screening candidates with multiple interviews, audits, and assignments, programs decrease the potential of selective screening bias as described by Uhl-Bien et al. (2014) and Oliveira (2015), where a limited portion of available candidate information enters the perception of a single candidate selector. A recommendation is to research further the differences between the most thorough and least restrictive methods of selection and quantifiably compare the outcome of selected candidates.

Respondents expressed a more developed EI as a desired attribute. The building blocks of EI, as defined by Goleman (2005), include self-awareness, self-regulation, motivation, empathy, and social skill, all characteristics described as desired in candidates by all participants in the interviews (Uhl-Bien et al., 2014). A recommendation is to increase the vetting and screening of applicants to assess candidate EI before admittance into expensive and time-consuming preparation courses. The practice could potentially decrease training costs, decrease the amount of turnover, decrease human resource management costs, and decrease instructor organizational fit tensions – the human factor.

Similarly, it is a consideration of longevity when a candidate minimally passes the preparation course or does not fit the culture necessary for adult learning, departing the program shortly after significant time and investment. A recommendation to achieve a better screening process includes multiple interviews or assessments by different levels of organizational members (Oliveira, 2015; Schuh, Jones, & Torres, 2017). By monitoring for inconsistencies in responses and actions, a complete valuation of the candidates EI, either through the interview process, formal assessments, or auditing, may be achievable before preparation course acceptance to clarify and help determine job and organizational fit.

Some respondents identified the need for accepting all candidates ostensibly to participate and act as filler candidates for courses to have enough participants. Although this practice may foster some success, a recommendation would be to recruit more viable candidates with stronger EI to enhance and accelerate learning in preparation courses. Interestingly, the characteristics and abilities most sought are those best fulfilled by professionals in the teaching, coaching, and education fields. When asked about the value of having an educational or teaching background, most participants expressed little significance.

This study exposed multiple variances in instructor candidate selection methods in motorcycle rider education in the United States, which can affect the quality of student and program outcomes. The most recent research recommended future study because of previous methodological weaknesses, this research considers the impact of candidates and potentially the instructors selected as a critical mechanism to facilitate student learning and also recommends deeper exploration of the topic (Baldi et al., 2005; Daniello et al., 2009; Kardamanidis et al., 2010; Horswill, 2016; Senserrick et al., 2016).

5. Conclusion

Individual programs must determine the advantages of additional selection requirements to improve quality. The effort and

time spent on candidates who do not have the desired characteristics and abilities to fit with current culture or to complete a preparation course is considerable. Recruitment and screening practices commonly used in educational and human resource domains further reinforced by organizational behavior research, could be invaluable for determining stronger candidates as the need for competent instructors grows.

The results of this study identifies basic practices for the improvement of instructor selection processes, suggesting early candidate assessment might identify stronger emotional intelligence as a primary way to differentiate better instructor fit. By using basic interviewing techniques and auditing to assess candidates before preparation courses, emotional intelligence determination and motivations could substantially increase candidate quality, translating eventually into quality of student learning in motorcycle rider educational environments.

6. Practical application

Application of this research in motorcycle rider education and other instructor-led educational disciplines may potentially decrease the long-term effort and cost of sending candidates through preparation courses or overly extensive onboarding processes, ultimately resulting in poor outcomes. The practices, when implemented upfront, could improve instructor and organizational quality when selection addresses a holistic fit instead of meeting the minimal conventional compliance-based hiring criteria. Subsequent investigations can further this study by analyzing the impact of candidate selection on the longevity of instructor employment and some determination of instructor efficacy by monitoring student outcomes in a longitudinal study.

7. Presentation of results

Preliminary results of this research was presented at the 2019 Motorcycle Safety Foundations International Rider Education Training Systems Workshop in Columbus, Ohio, the 2019 National Association of State Motorcycle Safety Administrators Summit in Grand Rapids, Michigan, and the 2020 Institut für Zweiradsicherheit Virtual 13th International Motorcycle Conference in Cologne Germany.

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Declaration of Competing Interest

The author declares he has that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

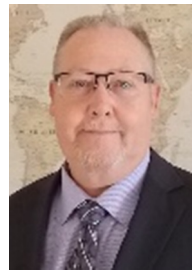
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References

Akhmetova, J. B., Kim, A. M., & Harnisch, D. L. (2014). Using mixed methods to study emotional intelligence and teaching competencies in higher education. *Procedia*

- *Social and Behavioral Sciences*, 128, 516–521. <https://doi.org/10.1016/j.sbspro.2014.03.198>.
- Arthur, W., Jr., & Doverspike, D. (2001). Predicting motor vehicle crash involvement from a personality measure and a driving knowledge test. *Journal of Prevention and Intervention in the Community*, 22(1), 35–42. https://doi.org/10.1300/J005v22n01_04.
- Augetit, S., Riff, J., Buttelli, O., & Espie, S. (2013). Naturalistic Study of Rider's Behavior in initial training in France: Evidence of limitations in educational content. *Accident Analysis and Prevention*, 58, 206–217. <https://doi.org/10.1016/j.aap.2012.09.036>.
- Baldi, S., Baer, J. D., & Cook, A. L. (2005). Identifying best practices states in motorcycle rider education and licensing. *Journal of Safety Research*, 36, 19–32. <https://doi.org/10.1016/j.jsr.2004.11.001>.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bramley, A., Rodriguez, A. A., Chen, J., Desta, W., Weir, V., DePaul, V. G., & Patterson, K. K. (2018). Lessons about motor learning: How is motor learning taught in physical therapy programs across Canada? *Physiotherapy Canada*, 70(4), 365–372. <https://doi.org/10.3138/ptc.2017-31e>.
- Breakwell, G. M. (2014). *The psychology of risk* (2nd ed.). Cambridge, U.K.: Cambridge Press.
- Daniello, A., Gabler, H., & Mehta, Y. (2009). The effectiveness of motorcycle training and licensing. Presented at the 88th Annual Meeting of the Transportation Research Board, Washington, DC.
- Danielson, C. (2007). *Enhancing professional practice: A framework for teaching* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- de Craen, S., Vissers, J., Houtenbos, M., & Twisk, D. (2005). *Young drivers experience – The results of a second phase training on higher-order skills*. Leidschendam, Netherlands: SWOV Institute for Road Safety Research.
- Dewey, J. (2015). *Experience and education*. New York: Free Press (Reprinted from Kappa Delta Pi, 1938).
- Dorn, L. (2005). Driver coaching: Driving standards higher. In L. Dorn (Ed.), *Driver behavior and training: Volume II* (pp. 471–478). Burlington, VT: Ashgate.
- Dorn, L., & Brown, B. (2003). Making sense of invulnerability at work—a qualitative study of police drivers. *Safety Science*, 41(10), 837–859. [https://doi.org/10.1016/S0925-7535\(02\)00036-X](https://doi.org/10.1016/S0925-7535(02)00036-X).
- Evans, L. (1991). *Traffic safety and the driver*. New York: Van Nostrand Reinhold.
- Evans, L. (2004). *Traffic safety*. Bloomfield Hills, MI: Science Serving Society.
- Evans, L., & Schwing, R. C. (Eds.). (1985). *Human behavior and traffic safety*. Boston, MA: Springer US.
- Feldstein, L. E. (2017). Teacher self-efficacy and implicit theories of intelligence: Implications for novice teacher retention (Doctoral dissertation). doi:10.21220/W42M2X.
- Goleman, D. (2005). *Emotional intelligence*. New York: Bantam.
- Gregersen, N. P. (2005). Driver education – A difficult but possible safety measure. In L. Dorn (Ed.), *Driver behavior and training: Volume II* (pp. 145–153). Burlington, VT: Ashgate.
- Haworth, N. L., & Mulvihill, C. (2005). *Review of motorcycle licensing and training, report 240* Monash University Accident Research Centre. Melbourne, Australia: Monash University.
- Hannon, J., Hocking, C., Legge, K., & Lugg, A. (2018). Sustaining interdisciplinary education: Developing boundary crossing governance. *Higher Education Research & Development*, 37(7), 1424–1438. <https://doi.org/10.1080/07294360.2018.1484706>.
- Horswill, M. S. (2016). Improving fitness to drive: The Case for hazard perception training. *Australian Psychologist*, 51(3), 173–181. <https://doi.org/10.1111/ap.12132>.
- Kardamanidis, K., Martiniuk, A., Ivers, R. Q., Stevenson, M. R., & Thistlethwaite, K. (2010). Motorcycle rider training for prevention of road traffic crashes (review). *Cochrane Database of Systematic Reviews*, 10. <https://doi.org/10.1002/14651858.CD005240.pub2>.
- Lemke, J. C. (2010). Attracting and retaining special educators in rural and small schools: Issues and solutions. *Rural Special Education Quarterly*, 14(2), 25–30. <https://doi.org/10.1177/875687051002900106>.
- Loosemore, M., Raftery, J., Reilly, C., & Higgson, D. (2006). *Risk management in projects* (2nd ed.). New York: Taylor and Francis. doi: 10.4324/9780203963708.
- Mortiboys, A. (2011). *Teaching with emotional intelligence: A step-by-step guide for higher and further education professionals*. New York: Routledge.
- National Highway Traffic Safety Administration (2009, August). Feasibility study on evaluating driver education curriculum. (Report No. DOT HS 811 108) Washington, DC: Author. Retrieved from <http://www.nhtsa.gov/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811108.pdf>.
- National Highway Traffic Safety Administration. (2014, November). Model national administrative standards for state motorcycle rider training programs. (Report No. DOT HS 812 071). Washington, DC: Author. Retrieved from <http://www.nhtsa.gov/staticfiles/nti/pdf/812071-ModelNatAdminMotorcycle.pdf>.
- Oliveira, T. C. (2015). *Rethinking interviewing and personnel selection*. New York: Palgrave MacMillan. doi:10.1057/9781137497352.
- Rowden, P. J., Watson, B. C., & Haworth, N. L. (2012, October). Risk taking by motorcyclists: Rider training and stages of change. Paper presented at the Australasian Road Safety Research, Policing, and Education Conference. Wellington, New Zealand. Retrieved from <https://eprints.qut.edu.au/53447/>.
- Senserrick, T., McRae, D., Wallace, P., De Rome, L., Rees, P., & Williamson, A. (2016). *Development of education and assessment components of Victoria's new motorcyclist graduated licensing system: Summary report*. Basel, Switzerland: Author.
- Senserrick, T., McRae, D., Wallace, P., De Rome, L., Rees, P., & Williamson, A. (2017). Enhancing higher-order skills education and assessment in a graduated licensing system. *Safety*, 3(14), 1–17. <https://doi.org/10.3390/safety3020014>.
- Schuh, J. H., Jones, S. R., & Torres, V. (Eds.). (2017). *Student services: A handbook for the profession* (5th ed.). San Francisco, CA: Jossey-Bass.
- Tagliabue, M., Gianfranchi, E., & Sarlo, M. (2017). A first step toward the understanding of implicit learning of hazard anticipation in inexperienced road users through a moped riding simulator. *Frontiers in Psychology*, 8, 768. <https://doi.org/10.3389/fpsyg.2017.00768>.
- Uhl-Bien, M., Schermerhorn, J. R., & Osborn, R. N. (2014). *Organizational behavior: Experience grow contribute* (13th ed.). Hoboken: Wiley.
- Vidotto, G., Tagliabue, M., & Tira, M. D. (2015). Long-lasting virtual motorcycle-riding trainer effectiveness. *Frontiers in Psychology*, 6(1653). <https://doi.org/10.3389/fpsyg.2015.01653>.



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