Online-Journals.org

iJAC International Journal of Advanced Corporate Learning

iJAC | eISSN: 1867-5565 | Vol. 17 No. 2 (2024) | OPEN ACCESS

https://doi.org/10.3991/ijac.v17i2.45237

TLIC PAPER

Nurturing Feedback and its Impact on Self-Efficacy, Empowerment, and Professional Growth in Educational and Corporate Environments

Zinka Bejtic(✉)

American University of Sharjah, Sharjah, United Arab Emirates

zbejtic@aus.edu

ABSTRACT

This study examines the impact of feedback quality in design education on students' self-efficacy. It argues that nurturing feedback can positively influence students' self-efficacy, leading to increased effort, perseverance, and eagerness to embrace challenges. A case study conducted in a senior design studio course at the American University of Sharjah (UAE) explores the effects of feedback. It proposes strategies to transform it into a nurturing tool for students' self-efficacy. The insights gained provide valuable guidance for all instructors involved in educational environments where feedback plays a pivotal role in students' growth and development. Furthermore, the findings have broader implications for the corporate design sector, emphasizing the importance of nurturing feedback to empower employees and foster their professional growth. Empowered employees are more likely to embrace challenges, take initiative, and contribute to organizational success, making nurturing feedback a vital factor in promoting a positive and productive work environment.

KEYWORDS

self-efficacy, nurturing feedback, corporate learning

1 INTRODUCTION

Initially introduced in the 1970s, self-efficacy has gained increasing recognition in recent years as a determinant of student academic achievement and a critical factor in corporate learning environments. Self-efficacy levels vary among individuals and significantly impact their capacity to persevere through challenging tasks and achieve success in academic or professional settings. This study investigates how educators, particularly in creative disciplines, can bolster self-efficacy among their students through the implementation of effective feedback strategies. The results demonstrate that the modification of critique sessions and the improvement of teacher-student interactions can positively influence self-efficacy, thereby leading

Bejtic, Z. (2024). Nurturing Feedback and its Impact on Self-Efficacy, Empowerment, and Professional Growth in Educational and Corporate Environments. *International Journal of Advanced Corporate Learning (iJAC)*, 17(2), pp. 17–27. https://doi.org/10.3991/ijac.v17i2.45237

Article submitted 2023-09-25. Revision uploaded 2024-01-13. Final acceptance 2024-01-23.

to enhanced academic and professional performance among learners in both educational and corporate contexts.

2 COMMON FRAMEWORK AND DEFINITIONS

The studio classroom is a distinctive educational environment in creative disciplines, typically accommodating small class sizes allowing for personalized attention and feedback [1]. Creative pedagogy prioritizes hands-on demonstrations, process-oriented engagement, and personalized feedback. Studio education emphasizes experiential learning and the social context, recognizing a 'hidden curriculum' [2]. Studio instructors are crucial in crafting compelling learning experiences, including content delivery, management, and facilitating individualized critique sessions [3]. These critique sessions are valuable in creative disciplines and corporate settings, fostering critical thinking, problem-solving skills, and professional development.

2.1 The construct of academic self-efficacy

In academic literature, intrinsic motivation and academic self-efficacy are critical predictors of student achievement [4], reflecting the importance of students' genuine interest in learning, nurtured by supportive instructors. Student self-efficacy, encompassing beliefs in their ability to tackle academic tasks, derives from various sources, including positive mastery experiences, vicarious learning, social persuasion, and emotional and physiological states [5]. In academic settings, social persuasion plays a pivotal role in shaping students' self-efficacy [5]. Studio instructors have a significant influence in shaping the studio classroom experience. Neglecting this influence can lead to various issues, including miscommunication, unmet expectations, and demoralized students with low self-efficacy. However, many studio instructors need formal pedagogical training, which institutions often need to pay more attention to when prioritizing research achievements over teaching qualifications [6].

The quality of relationships between studio instructors and students, coupled with feedback types, impacts students' self-efficacy and creative performance. Corrective feedback based solely on opinions negatively affects self-efficacy, while nurturing feedback enhances self-efficacy, creativity, and critical thinking [7]. This study highlights the importance of nurturing feedback in personalizing students' learning experiences. Self-efficacy, a critical factor in motivation, behavior, and achievement, refers to an individual's belief in their ability to perform specific tasks or achieve particular goals. It differs from self-esteem, which pertains to global self-appraisal. Students with high self-efficacy are more likely to set challenging goals, persevere through challenges, and succeed. When students evaluate a course, they primarily consider the instructor and determine whether the class is interesting or dull [8]. Thus, the pedagogy of creative disciplines encompasses not only teaching, learning, curriculum, and assessment but also the quality of relationships between instructors and students and the type of feedback students receive.

Self-efficacy, a critical component in human motivation, behavior, and achievement, is defined as the belief an individual has in their ability to successfully perform a particular task or achieve a specific goal. With a robust sense of self-efficacy, individuals are more likely to set challenging goals, persist through

difficulties, and ultimately attain success. It is important to distinguish self-efficacy from self-esteem, which pertains to an individual's global self-appraisal of their worth and competence. While self-esteem is a broad, generalized construct, self-efficacy is context-specific, applied to a particular task or situation.

"Students may experience higher self-efficacy when they are told they are capable of learning by a trustworthy source, whereas they may discount the advice of less credible sources" [9]. Past experiences, social support, and personal characteristics also influence this belief. Those with high self-efficacy are more likely to set challenging goals, persevere through obstacles, and take proactive steps to achieve their desired outcomes. Contrary to that, people with low self-efficacy tend to become demotivated, and avoid challenges.

Academic self-efficacy, specifically related to educational tasks, significantly predicts academic success [10]. Students learn through observation, imitation, and modeling. The interaction between the individual, the environment, and the behavior shapes that behavior [11]. Bandura's social cognitive theory underscores the role of self-efficacy in human functioning, influencing cognition, emotion, motivation, and behavior. Successes bolster self-efficacy, while failures can undermine it, especially when experienced early in development [12]. Research consistently demonstrates that academic self-efficacy is a prominent predictor of academic achievement [13]. A strong sense of self-efficacy fosters a growth mindset, encouraging students to embrace challenges, learn from mistakes, and develop resilience, which is particularly valuable in design disciplines [13]. Measuring self-efficacy can be complex due to its subjective nature. However, various scales and measures have been developed to assess self-efficacy across different domains, helping researchers understand its influence on various aspects of life [14].

2.2 Corporate learning

Similar to the significance of teacher-student interactions in educational contexts, establishing a nurturing and supportive learning environment within corporate settings is equally crucial for enhancing individuals' self-efficacy. Within this framework, supervisors and trainers assume critical roles in cultivating an environment that thrives on open channels of communication, the promotion of employee engagement, and the demonstration of empathy and comprehension. This supportive ecosystem engenders a state of psychological safety in which the employees feel secure to take risks, solicit feedback, and embrace new challenges. Furthermore, opportunities for collaborative work, peer-based learning, and mentorship programs contribute substantively to enhancing self-efficacy. Encouraging employees to share their knowledge and experiences, acquire insights from colleagues, and benefit from the wisdom of mentors directly contributes to a culture of growth, learning, and professional advancement. In corporate learning, various initiatives are designed to provide individual and group learning opportunities, such as training programs, immersive workshops, e-learning modules, mentorship frameworks, and tailored coaching sessions. Corporate learning also thrives under a learner-centric paradigm. Here, supervisors or trainers assume the role of facilitators, guiding employees through the learning journey and providing indispensable feedback and support. However, in the corporate setting, the focal point extends beyond individual skill enhancement, focusing on harnessing organizational objectives such as heightened productivity, cultivating an innovative ethos, and increasing employee engagement.

2.3 Role of Feedback in design education and corporate learning

As most of the learning in design studios happens during critique sessions, it is clear why feedback is the most critical aspect of design education and why it directly impacts students' motivation, engagement, and self-efficacy. The type of feedback, the tone, and the context in which it is provided impact its effect on students' self-efficacy [15]. Actionable, precise, and nurturing feedback acknowledging one's efforts enhance self-efficacy, allowing the student to set more challenging goals, persist through difficulties, and take on new tasks. In contrast, negative feedback or criticism lowers self-efficacy, creates doubt in one's abilities, and causes students to feel demotivated and discouraged, negatively impacting their performance. This is true in corporate settings, where feedback shapes employees' motivation and engagement. The nature of feedback, its tone, and the context in which it is delivered wield considerable influence over its effects on individuals' self-efficacy [15]. In the following study, the potency of social persuasion as a source of self-efficacy established by social cognitive theory and the answer to the research question: does the feedback provided by the instructor within studio disciplines have an impact on the self-efficacy of students? As described by Schön [16], design critiques or feedback sessions play a central role in the learning process. The studio instructor draws upon their existing repertoire of knowledge, experience, and examples to provide comments. Carol Dweck's [17] research has shown that providing the appropriate type of corrective feedback, which acknowledges effort rather than achievement and encourages challenging tasks, is vital for increasing students' sense of self-efficacy. During desk crits, the instructor spends time with a group of students or individually with each student, typically reviewing their work at their desks and providing feedback. Design education involves the development of creative and critical thinking skills, as well as technical proficiency in various design software and tools. Effective feedback is critical in helping design students enhance their work and develop their skills. It provides learners with information about their progress, helps them identify areas for improvement, and directly impacts learners' sense of self-efficacy [18]. In corporate learning, feedback constitutes a fundamental pedagogical tool that substantially influences employees' professional development. Feedback, defined as information provided to learners regarding their performance, is a linchpin of the corporate learning process. Its multifarious forms encompass evaluative, corrective, and nurturing feedback, each serving distinct educational objectives. Evaluative feedback provides employees with a clear assessment of their performance vis-à-vis established benchmarks, facilitating self-assessment and goal alignment. Corrective feedback serves to rectify erroneous approaches or misconceptions, promoting adaptive learning and skill refinement.

On the other hand, nurturing feedback focuses on recognizing and reinforcing positive efforts, thereby nurturing a sense of self-efficacy and motivation. The contextual backdrop within which feedback is delivered holds significant importance. Corporate learning environments encompass diverse instructional modalities, including mentorship programs, workshops, seminars, e-learning modules, and on-the-job training. Each of these contexts influences the nature and effectiveness of feedback delivery. For instance, mentorship programs often facilitate one-on-one interactions between mentors and mentees, affording personalized and tailored feedback.

Conversely, in a workshop or seminar setting, feedback may take on a more generalized form, targeting the collective learning experiences of participants.

Furthermore, feedback dynamics in corporate settings are profoundly intertwined with establishing the instructor-learner relationship. Instructors, whether in the form of mentors, trainers, or supervisors, assume a pivotal role in shaping the feedback process. Their expertise, experience, and ability to provide constructive, actionable feedback significantly impact the quality of the learning experience and, consequently, employees' self-efficacy. The ramifications of feedback within corporate learning environments extend beyond immediate performance enhancement. Effective feedback has enhanced employees' sense of self-efficacy, fostering a heightened willingness to engage in challenging tasks, persist through adversity, and embrace professional growth opportunities. Conversely, negative feedback can engender self-doubt, demotivation, and reduced performance. Not all types of feedback are equal concerning their impact on an individual sense of self-efficacy:

Critical corrective feedback is concerned with identifying and rectifying errors in students' work. Although it can be advantageous in enhancing students' performance, it may also be discouraging if perceived as excessively critical or punitive. When accompanied by supportive guidance on how to improve and framed in a constructive manner, corrective feedback can promote self-efficacy and a growth mindset. Additionally, it can assist students in seeing their mistakes as opportunities for learning and growth.

Constructive feedback concentrates on recognizing areas that need improvement and providing precise directions for progress. Typically, this kind of feedback is presented positively, emphasizing what was accomplished satisfactorily and providing detailed recommendations for enhancement. Constructive feedback fosters a growth mindset, which allows students to view mistakes as opportunities for learning and growth rather than setbacks. When provided appropriately, constructive feedback has a positive influence on self-efficacy. Moreover, it can be empowering, enabling students to take ownership of their learning and progress.

Nurturing feedback focuses on encouraging and reinforcing positive approaches and behaviors, attitudes, and mindsets in students. It involves providing meaningful support and recognition of efforts to allow students to gradually build confidence in their skills and motivation to engage with challenging tasks. Constructive criticism coupled with nurturing feedback highlights the areas for improvement while simultaneously acknowledging students' strengths and their efforts. It is a powerful tool for building positive relationships, enhancing students' performance, and creating a supportive and empowering work environment.

Positive feedback serves to recognize and endorse the strengths and achievements of students. By doing so, it has the potential to cultivate a sense of worth and assurance in their competencies, thereby enhancing their motivation and involvement. Nonetheless, it is imperative to ensure that such feedback is authentic and precise instead of generic or disingenuous.

Negative feedback entails identifying inadequacies or errors in students' work. While it can facilitate the identification of areas that require enhancement, it may also have a demotivating effect if perceived as excessively critical or unaccompanied by constructive guidance on how to improve. This can lead to a reduction in students' self-efficacy. Additionally, if the negative feedback fails to acknowledge or appreciate students' efforts, it may further contribute to their demotivation.

Adaptive feedback is characterized by its customization and alignment with the learners' competencies and requirements, which renders it highly efficacious in fostering self-efficacy. By providing a personalized outlook, adaptive feedback facilitates the perception of progress and development over time, thereby reinforcing a growth-oriented mindset. In essence, feedback characterized by specificity,

personalization, and a positive tone will likely substantially influence learners' self-efficacy and achievements.

Technical feedback pertains to the technical facets of design, encompassing craftsmanship, materials, and techniques. Positive technical feedback can enhance design students' confidence in their technical acumen, augmenting their self-efficacy in executing design tasks proficiently. Conversely, negative, or insufficient technical feedback may have an adverse impact on students' self-efficacy, given that it may imply inadequacies or limitations in their technical competencies.

Conceptual feedback directs attention to the conceptual dimensions of design, encompassing clarity, coherence, aesthetics, and overall design vision. Affirmative conceptual feedback that authenticates and reinforces students' creative notions and concepts can substantially bolster their self-efficacy by attesting to their capacity to generate inventive and captivating design concepts. In contrast, critical or dismissive conceptual feedback may impede students' self-efficacy, instilling doubt in their ability to develop robust design concepts.

Process feedback pertains to the design process, encompassing the aptitude to efficiently plan, organize, and manage the various phases of the design process. Insufficient or erratic process feedback may result in bewilderment and self-questioning, potentially leading to a decline in students' self-efficacy. Conversely, constructive process feedback that steers students in enhancing their design process can augment their self-efficacy by enabling them to formulate practical approaches for tackling design tasks.

Peer feedback encompasses feedback from fellow students or peers in a design program. Affirmative and constructive peer feedback can considerably augment design students' self-efficacy, given that it offers diverse perspectives and insights, authenticates their design choices, and nurtures a sense of community and collaboration. Nonetheless, peer feedback that is negative or unhelpful, characterized by excessive criticism or an absence of constructive suggestions, may have an adverse effect on students' self-efficacy, leading to self-doubt and reduced confidence in their design competencies.

Self-reflection feedback that promotes self-awareness, critical thinking, and self-improvement has the potential to enhance self-efficacy. Self-reflection feedback requires students to introspectively scrutinize their design work and provide self-assessment. It enhances students' capacity to evaluate their work and identify their strengths and areas of improvement. Nevertheless, self-reflection feedback that is excessively self-critical or biased may harm students' self-efficacy, especially if they overemphasize their perceived weaknesses or overlook their strengths.

Overall, the impact of different types of feedback on one's sense of self-efficacy can depend on the feedback's nature, quality, and timing. In addition, students' perceptions of feedback are directly related to their self-regulation, self-efficacy, and academic achievement levels. Specifically, students who view feedback as primarily evaluative or critical have low self-regulation and self-efficacy and lower academic achievement. In contrast, students who view feedback as primarily informative or helpful have higher self-regulation, self-efficacy, and academic achievement levels. The way a student perceives the feedback has a significant impact on their academic outcomes. It highlights the importance of providing informative and supportive feedback rather than solely evaluative or critical [19]. While corrective feedback can be beneficial in improving performance, it should be provided in a supportive and constructive manner to avoid undermining students' confidence. Finally, feedback that is specific, personalized, and framed positively is likely to have the most significant impact on students' self-efficacy and success.

3 METHODOLOGY

This study examines the impact of critical vs. nurturing feedback on design students' sense of self-efficacy. Sixteen students attending a fourth year of the Bachelor of Science Multimedia Design undergraduate program at the American University of Sharjah participated in the study. The entire process was subjected to an evaluation of the interview participants to increase the validity of the findings. The researcher also kept a reflective journal with the comments from participating students as they relate to the transcribed interviews. The qualitative synthesis stage in the data analysis process in qualitative research represents the most debated segment since it depends on the researcher's judgment [20].

3.1 Pre-screening instrument

A pre-screening tool for assessing academic self-efficacy, comprising eight questions, was utilized to evaluate the self-efficacy levels of thirty students before the commencement of the study. The tool was intended to select only those students who scored high in self-efficacy. Upon completion of the survey, the collected data was numerically organized, and the high self-efficacy belief average score section was scrutinized to select sixteen students for participation in the study.

3.2 Data collection and simulation

This study sought to discover further information about the impact of corrective and nurturing feedback on students' self-efficacy. The study was conducted through phenomenological, explorative qualitative focus group interviews that applied an inductive approach in data analysis to understand participants' perspectives, views, and practices identified through codes and themes. This study investigated the impact of corrective and nurturing feedback on students' self-efficacy. Sixteen senior students from the Multimedia Design program at the American University of Sharjah, identified as having high self-efficacy, participated in the study during the Fall 2022 semester. They were divided into two groups: Group A received critical corrective feedback, while Group B received nurturing feedback. The project was introduced solely for the study's purpose, not part of the regular course curriculum, and not assessed. Over four weeks, each student had four individual critique sessions with the same unfamiliar instructor. Afterward, all sixteen students were interviewed using a phenomenology protocol, with questions focusing on their feedback experiences, motivation, confidence, and other relevant aspects. Interviews, lasting 45–60 minutes, were audio-recorded and transcribed. A systematic qualitative analysis approach was applied, including systematic text condensation, to derive categories and themes from the interview data. The emergent structure among the coded material was noted and classified into condensed codes while preserving the essence. Bracketing and epoché processes were used to minimize biases and allow for a more objective exploration of the phenomenon.

3.3 Data analysis

The qualitative research data underwent systematic analysis using an inductive approach. This process included transcription of interviews, researcher familiarization

with the data, initial pattern and theme identification, coding (utilizing both descriptive and interpretive methods), and fostering the emergence of new themes. The subsequent step involved categorizing codes without predefined categories to capture broader emerging themes and ensure code reliability. The categories were then scrutinized for patterns and relationships, amalgamating similar categories and eliminating irrelevant ones, streamlining the data. Subsequently, a narrative was developed to elucidate relationships between categories, supported by pertinent data excerpts. To bolster validity, participant feedback and researcher-reflective journaling were employed. The qualitative synthesis stage in data analysis, which hinges on the researcher's judgment, was executed with precautions to address potential bias. Furthermore, *Quirkos* software facilitated coding, data exploration, thematic visualization, journaling, memos, and summaries for reflective analysis. Customizable reports and graphical representations of text data were generated.

4 FINDINGS

Data from Group B, which received nurturing feedback, reveals key themes: increased self-confidence and creativity, higher intrinsic motivation, a cultivated growth mindset, a positive learning environment, enhanced project outcomes, and improved well-being. Nurturing feedback directly influences students' self-efficacy as follows:

Increased Self-Confidence and Creativity. Participants gained confidence, fostering creativity. Constructive feedback encouraged them to experiment with new techniques, explore unconventional ideas, and confidently present their work, leading to innovative designs.

Increased Intrinsic Motivation. Students became more enthusiastic and curious, committing to high-quality work. Autonomy in project direction fueled their desire for knowledge and skill development, boosting engagement.

Expanded Growth Mindset. Many became more motivated, embracing challenges as opportunities and actively seeking feedback from peers and instructors. They willingly invested effort toward their goals, highlighting feedback's role in motivation and growth.

Positive Learning Environment and Stronger Relationships. Nurturing feedback fostered a collaborative, supportive studio atmosphere, nurturing a sense of community. Students developed strong connections with instructors, encouraging open communication and student-led initiatives.

Improved Project Outcomes. Nurturing feedback positively impacted academic results, focusing on strengths and progress. Participants gained clarity in defining goals enhancing focus and motivation. Feedback improved project management, encouraging design refinement.

Enhanced Physical and Emotional Well-being. Nurturing feedback prioritized emotional and physical well-being, promoting a supportive environment. Open communication and peer support contributed to comfort within the studio. Instructors' genuine care underscored a focus on overall well-being.

In organizational contexts, fostering self-efficacy in employees yields key outcomes:

Increased Employee Motivation and Engagement. Employees with elevated self-efficacy exhibit higher motivation, engagement, and proactivity. They believe in their abilities, enhancing job satisfaction and commitment.

Improved Performance and Productivity. High self-efficacy drives employees to set ambitious goals, persevere, and excel. This boosts individual and team performance and elevates productivity.

Enhanced Creativity and Innovation. Self-efficacy correlates with creativity and innovation. Employees with strong self-efficacy are more willing to take risks and think creatively, fostering innovation.

Increased Employee Retention and Satisfaction. Organizations prioritizing self-efficacy enjoy higher retention rates. Employees who feel competent and supported remain with the organization, contributing to long-term success and higher satisfaction levels.

5 CONCLUSION

The study, in line with Bandura's social cognitive theory [21], highlights the pivotal role of instructors and the learning environment in shaping design students' self-efficacy. Acting as agents of change, instructors influence students' performance through the triadic relationship of personal, behavioral, and environmental determinants [21]. Positive class experiences enhance self-efficacy, whereas stress and anxiety diminish it [22]. Instructors can integrate nurturing feedback into any studio-based learning environment to enhance self-efficacy. Design studios commonly use critiques to provide constructive feedback and improve students' work. Nurturing feedback, however, prioritizes students' transformational experiences, encouraging exploration of their potential and facilitating discovery. Effective instructors consider students' capabilities and worldviews, helping them navigate and shape the world as they desire [23]. Investigating feedback's direct impact on creative project development and its relationship with self-efficacy, creativity, and experimentation is vital in understanding motivation in creative disciplines. While self-efficacy does not equate to talent, it fosters creative abilities, motivating students to persevere. Numerous studies demonstrate the positive correlation between self-efficacy and design performance [24], [25], [26], [27]. Designers with confidence invest more effort, take risks, and set ambitious goals, contributing to their success [28].

This study confirms nurturing feedback's role in studio classrooms. It suggests further research into enhancing self-efficacy in educational institutions teaching design by providing training for instructors. Such training empowers instructors to create nurturing studio environments, fostering self-efficacy through self-reflection and peer assessment. Transformative teaching necessitates inclusive and humane approaches, shifting from purely critical to inspirational practices across disciplines.

In corporate learning, self-reflection and self-assessment enhance self-efficacy. Encouraging employees to reflect on performance, identify improvement areas, and set personal development goals empowers individuals to take ownership of learning and growth. Self-assessment activities, like self-evaluation forms or reflection exercises, allow employees to evaluate skills and progress, fostering self-awareness and confidence. Organizations can leverage digital tools and platforms to facilitate self-reflection and self-assessment. Online learning platforms or performance management systems enable employees to track learning activities, set goals, and document achievements. These tools provide tangible progress records, reinforcing employees' belief in their abilities and promoting self-efficacy.

6 IMPLICATIONS AND FUTURE DIRECTIONS

This study presents an educational intervention to enhance students' self-efficacy in creative studio disciplines. Results show a positive link between constructive,

nurturing feedback and increased self-efficacy, suggesting broad applicability in design studio contexts. Future research with larger samples and longer durations can validate its effectiveness further. Furthermore, this intervention's applicability extends to corporate learning. Future research should explore contextual variations and nuances in corporate settings to advance this area. Longitudinal studies can measure its impact on employee motivation, performance, creativity, and job satisfaction. Investigating individual factors like motivation and learning styles will provide insights. Personalizing feedback and learning experiences to meet individual needs can promote continuous learning and growth in corporate settings.

7 REFERENCES

[1] J. K. Ochsner, "Behind the mask: A psychoanalytic perspective on interaction in the design studio," *Journal of Architectural Education*, vol. 53, no. 4, pp. 194–206, 2000. https://doi.org/10.1162/104648800564608

[2] T. A. Dutton, *Voices in Architectural Education: Cultural Politics and Pedagogy*, Bergin & Garvey, 1991. https://doi.org/10.2307/1425098

[3] D. A. Kolb, *Experiential Learning: Experience as the Source of Learning and Development*, Prentice-Hall, 1984.

[4] E. L. Deci and R. M. Ryan, (Eds.). *The Handbook of Self-Determination Research*, University of Rochester Press, 2006.

[5] A. Bergen, "Self-efficacy, special education," *InSight: Rivier Academic Journal*, vol. 9, no. 2, 2013. Available at: https://www.rivier.edu/journal/ROAJ-Fall-2013/J783-Bergen.pdf.

[6] J. Biggs, "Teaching for quality learning at university – what the student does," 2nd edn. Open University Press, Milton Keynes, 2003.

[7] M. V. Grory, *Teaching Excellence in Higher Education,* Palgrave Macmillan, New York. 2013. https://doi.org/10.1057/9781137373762

[8] R. V. Small, "Dimensions of interest and boredom in instructional situations," *Paper Presented at the National Convention of the Association for Educational Communication and Technology*, Indianapolis, IN, 1996.

[9] D. H. Schunk, "Self-efficacy and academic motivation," *Educational Psychologist*, vol. 26, pp. 207–231, 1991. https://doi.org/10.1080/00461520.1991.9653133

[10] A. Zajacova, S. M. Lynch, and T. J. Espenshade, "Self-efficacy and stress," *Research in Higher Education*, vol. 46, no. 6, 2005. Retrieved from http://www.princeton.edu/~tje/files/Self%20Efficacy%20and%20Stress%20Zajacova%20Lynch%20Espenshade%20Sept%202005.pdf.

[11] A. Bandura, "Self-efficacy: Toward a unifying theory of behavioral change," *Psychological Review*, vol. 84, pp. 191–215, 1977. https://doi.org/10.1037/0033-295X.84.2.191

[12] A. Bandura, *Self-Efficacy*, Academic Press, San Diego, 1994.

[13] A. R. Artino, "Academic self-efficacy: From educational theory to instructional practice," *Perspect Med Educ*, vol. 1, no. 2, pp. 76–85, 2012. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3540350/.

[14] P. A. Heslin and U. C. Klehe, "Self-efficacy," in *Encyclopedia of Industrial/Organizational Psychology,* SG Rogelberg, Ed., vol. 2, pp. 705–708, 2006.

[15] S. Gielen, *et al.*, "Improving the effectiveness of peer feedback for learning," *Learning and Instruction*, vol. 20, no. 4, pp. 265–348, 2010. https://doi.org/10.1016/j.learninstruc.2009.08.007

[16] D. A. Schön, *The Design Studio,* RIBA Publications, 1985.

[17] C. Dweck, "Motivational processes affecting learning," *American Psychologist*, vol. 41, no. 10, pp. 1040–1048, 1986. https://doi.org/10.1037/0003-066X.41.10.1040

[18] R. Ruegg, "The effect of peer and teacher feedback on changes in EFL students' writing self-efficacy," *The Language Learning Journal*, vol. 46, no. 2, pp. 87–102, 2018. https://doi.org/10.1080/09571736.2014.958190

[19] G. T. L. Brown, E. Peterson, and E. S. Yao, "Student conceptions of feedback: Impact on self-regulation, self-efficacy, and academic achievement," *British Journal of Educational Psychology*, vol. 86, no. 4, pp. 606–629, 2016. https://doi.org/10.1111/bjep.12126

[20] R. E. Boyatzis, *Transforming Qualitative Information*, Sage, 1998.

[21] A. Bandura, "Adolescent development from an agentic perspective," in *Self-Efficacy Beliefs of Adolescents*, Pajares, Frank and Urdan, Tim, Eds., Information Age Publishing, 2006, pp. 1–43.

[22] A. Bandura, "Social cognitive theory: An agentic perspective," *Annual Review of Psychology*, vol. 52, pp. 1–26, 2001. https://doi.org/10.1146/annurev.psych.52.1.1

[23] D. F. Hibbs, "An investigation of the self-efficacy beliefs of black and hispanic students that have experienced success or failure in mathematics," Ph.D. thesis, Seton Hall University, 2012. Retrieved from http://scholarship.shu.edu/cgi/viewcontent.cgi?article=2843&context=dissertations.

[24] E. White, "Elizabeth white on teaching for the 'whole student'," *Eye on Design*, AIGA. 2019. Available at: https://eyeondesign.aiga.org/higher-education-is-not-a-level-playing-fieldelizabeth-white-on-teaching-for-the-whole-student/.

[25] I. Metin-Orta and M. Kiygi-Calli, "The role of self-efficacy in the development of design thinking skills," *Thinking Skills and Creativity*, vol. 25, pp. 98–109, 2017.

[26] E. C. Jung and K. Jung-Ja, "The relationship between self-efficacy and creative performance in industrial design," *International Journal of Industrial Ergonomics*, vol. 44, pp. 533–538, 2014.

[27] R. Zhang and M. Xiaojuan, "Self-efficacy and design performance: An exploratory study," *International Journal of Design Creativity and Innovation*, vol. 7, no. 4, pp. 245–258, 2019.

[28] S. Kim and K. Wood, "Self-efficacy in design education: Exploring the relationship between self-efficacy, design performance, and learning outcomes," *Design Studies*, vol. 49, pp. 1–17, 2017.

8 AUTHOR

Zinka Bejtic, American University of Sharjah, Sharjah, United Arab Emirates (E-mail: zbejtic@aus.edu).