





Assessing the effectiveness of academic coaching interventions for student success in higher education: A systematic review

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ABSTRACT

Every student has the potential to change the world by making a significant contribution to society. Experiences in higher education significantly shape the development of this potential, for better or worse, leading to interventions to support student success. Among such interventions, academic coaching has been widely used; however, how do we know that it is effective? In this systematic literature review, we describe the characteristics of effective academic coaching interventions, including the format of coaching (individual or group coaching), coaching mode (in-person or distance via technology), coaching topics, coach background, duration, frequency. Focusing on peer-reviewed English journals between 2010 and May 2023, the study found 643 articles, 25 of which met the inclusion criteria following rigorous screening and consensus-reaching processes. Based on the findings, effective coaching interventions span at least 12 hours over 4 weeks, are preferably in-person, and are best facilitated by professional coaches.

KEYWORDS

Academic coaching; student retention; student support; academic success; well-being; student success

Introduction

Students who successfully navigate higher education's challenges reap rewards such as increased earning potential (Carnevale et al., 2021), expanded job opportunities (Rios et al., 2020), enhanced decision-making skills (Fry et al., 2009), and even more successful marriages (Oreopoulos & Salvanes, 2011). The significance of successful students extends beyond personal accomplishments; their achievements contribute to an institution's positive reputation, which can be crucial for economic stability through donor funding (Cannings et al., 2023). As institutions strive to support student success, interventions abound (Pandey et al., 2022; Sneyers & de Witte, 2018). Academic coaching is one such intervention. Rooted in positive psychology, it emphasises goal attainment, personal

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development, self-reflection, and performance maximisation (Grant, 2003). A spectrum of academic coaching interventions has emerged in higher education, from in-person one-to -one sessions, to discipline-specific group sessions, to automated messages based on student performance. Despite its growing prevalence, the effectiveness of academic coaching in this context remains an area of exploration, prompting the need for a systematic literature review to fill this knowledge gap.

Coaching distinguishes itself from counselling primarily by avoiding mental health issues (C. E. Robinson, 2015). The Coaching in Higher Education Consortium (CHEC) defined coaching as building personalised connections with students that encourage their autonomy, self-awareness, development, effectiveness, and resilience in education and throughout their lives (Coaching in Higher Education Consortium, 2024). A collaborative partnership with an academic coach focuses on clarifying academic, personal, and professional goals through structured, guided approaches (Mogashana et al., 2023). This approach involves reflective questioning, formal self-assessment, strategy sharing, and co-creation of tangible plans (C. E. Robinson, 2015). A fundamental outcome of academic coaching is the completion of an academic qualification (Capstick et al., 2019).

Reports of academic coaching show benefits linked to improved student success and well-being. First, academic coaching has been linked to improved academic performance and retention (Bettinger & Baker, 2011), increased grades, higher subsequent enrolment rates, and the acquisition of extra credits post-coaching (Alzen et al., 2021). Second, academic coaching enhances goal setting and achievement (Atad & Grant, 2021), including for students with disabilities (Potvin et al., 2023). McFarlane (2023) reported that coaching led students to have a renewed focus on their goals, improved their selfawareness, and provided them with a goal-driven, non-judgemental strategy to manage university stress and burnout. Third, academic coaching increases students' motivation and self-efficacy (Ben-Yehuda, 2015) and reduces educational stress among students (Sezer, 2016). Bellman et al. (2015) highlighted the positive impact of academic coaching on students' motivation, self-confidence, and various skill sets like time management, stress management, prioritisation, and note-taking. Fourth, academic coaching has been found to have positive effects on student mental well-being and, as an alternative approach to supporting student mental health, it may be useful in its proactiveness and student crisis prevention (Cameron et al., 2019; Jackson, 2018). The second author's experiences in leading group and individual academic coaching for university students (Mogashana et al., 2023) showed that the effects of academic coaching stretch to other aspects of students' lives, improving their personal relationships, financial management, and self-confidence.

As a sector of the coaching industry, academic coaching operates without standardised regulation. As in other forms of coaching, academic coaching relies on practitioners with diverse backgrounds and credentials. Some practitioners may have qualifications from recognised coaching institutions whereas others may have gained their skills and knowledge through personal experiences or self-study. This variability raises concerns about the quality and effectiveness of coaching services, especially within higher education, where student well-being and future life trajectories are at stake. The coaching industry has been criticised for a lack of rigorous empirical research supporting its effectiveness, for the presence of poorly designed research,

and for survey research that serves primarily as a marketing tool (Grant et al., 2010; Spence & Grant, 2007). Questions have been raised about the consistency and quality of coaching training (Grant & Green, 2018). Challenges concerning coaching in higher education include the cost of hiring an external provider or building an in-house programme, as well as the potential for coaching to be seen as a privileged service rather than a resource available to all students (Keen, 2014). Moreover, among the challenges that educators may experience are the dual role of educator and coach that some educators may assume, and the ethical and legal risks for educators assuming roles outside their area of competence, all of which may lead to compromising the quality and efficacy of coaching (Jones & Andrews, 2019).

This systematic literature review aims to contribute to the understanding of academic coaching interventions by addressing the crucial questions of their effectiveness and identifying characteristics that distinguish effective interventions from less effective ones. Ultimately, such insights are vital for informed decision-making in student support, impacting academic success, well-being, and retention within higher education. The research question we ask is: What characterises effective academic coaching interventions for undergraduate students?

With evidence from studies published from January 2010 to May 2023, we provide a comprehensive analysis of the effectiveness of academic coaching interventions in supporting undergraduate students in higher education. The conclusions will highlight the most effective academic coaching formats, providing practical guidance for higher education leaders in optimising student support resources.

Method

To conduct this review, we adhered to the methodological steps outlined in the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement (Page et al., 2021). Where some of the PRISMA sub-steps could not be followed due to our inclusion of qualitative data, we followed recommendations by Borrego et al. (2014) for systematic literature reviews in emerging fields. These steps encompassed: (i) defining the scope and research questions, (ii) establishing clear inclusion and exclusion criteria, (iii) conducting a thorough search for pertinent studies, (iv) screening studies based on predetermined eligibility criteria, (v) critically assessing and synthesising the included studies, and (vi) presenting the findings.

Establishing inclusion and exclusion criteria and search for publications

To investigate the effectiveness of academic coaching interventions in supporting students in higher education, we considered the following criteria: (i) publication type, (ii) language of publication, (iii) period of focus, (i) educational context, (v) research focus of a publication, and (vi) purpose. Table 1 provides a full description of each of these criteria.

The Purpose criteria was key to establishing the effectiveness of interventions. Intervention effectiveness could be described using qualitative data, such as interviews, open-ended surveys or reflective writing, as well as quantitative data, like grades or progression statistics.

Table 1. Inclusion and exclusion criteria for academic coaching interventions.

	Category	Inclusion criteria	Exclusion criteria	Explanation
i	Publication type	Peer-reviewed journal articles	Articles that are not peer- reviewed, or other types of publications such as editorial reviews, book chapters, books and conference papers on student academic coaching in higher education	Quality assurance of the research. Publications that do not explicitly use the words 'coaching', are excluded as we cannot assume that they are referring to it.
ii	Language of publication	Title, abstract and full article must be in English.	Articles that have titles in other languages, abstracts in other languages, or the body of the article in other languages.	Unfamiliarity with other languages limits our ability to judge translations.
iii	Period of focus	The research was conducted from 2010 to May 2023.	All research publications that were published to the year 2010 and after May 2023 when we had already searched for publications.	The research focuses on contemporary studies of academic coaching interventions.
iv	Educational context	Research was conducted in the context of universities and colleges.	Research conducted in primary or secondary schools, or the general public, or that focuses on sports coaching.	The research focuses on the field of higher education.
V	Research focus	The research focused on undergraduate student coaching interventions.	Research that focuses on other aspects of higher education, including coaching for staff and postgraduate students, practical coaching for teachers, nurses and doctors, and sports coaching.	The research focuses only on academic coaching interventions for undergraduate students.
vi	Purpose	Outcomes of the academic coaching intervention must be addressed as part of the study.	Student academic coaching is mentioned only indirectly, or as part of other interventions such as tutoring, counselling and advising and not forming a distinct part of the findings and outcomes of the research.	The research focuses on the effectiveness of academic coaching interventions independent of other interventions.

Conducting a thorough search for pertinent studies

Having clarified these criteria, we searched the literature in three relevant databases: EBSCOhost, ProQuest and Scopus to cover a wide range of education and higher education literature. Consulting with a specialised librarian proficient in systematic literature reviews, we validated our search string.

Our final search string in each database was: [('educational coaching' OR 'personal coaching' OR 'student coaching' OR 'academic coaching' OR 'life coaching') AND student AND ('higher education' OR 'university' OR 'college')]. The results of the search were filtered by source type (academic journals), language (English) and date (year 2010 – 8 May 2023). Initially, our search generated 756 records, subsequently reduced to 643 after the removal of duplicates and non-English entries.

Screening studies based on eligibility criteria

Using the inclusion and exclusion criteria outlined in Table 1, and to ensure consistency, we, the two researchers, individually screened the remaining 643 records by abstracts, using the collaborative online tool Rayyan (Ouzzani et al., 2016), to examine whether the content of the abstract met our inclusion criteria. The 'Blind

On' feature in Rayyan was used to prevent bias while we each screened records individually.

The Rayyan tool allowed each researcher to code the abstract record as 'included', 'excluded' or 'maybe'. While screening the abstracts on the tool, two further exclusion criteria were identified and agreed on:

- Peer-coaching we excluded all abstracts that used same-year peer students as peer coaches.
- Coaching as part of professional training all coaching for pre-service teachers and medical practitioners that were specifically about training them for the profession were excluded. Many of these abstracts were of this type, which felt inappropriate as they were specific to the requirement for a particular profession.

After independently reviewing abstracts, we compared our individual conclusions and identified that 584 out of the 643 did not meet our criteria and could be excluded. We also initially agreed on 15 records that we had both included. However, we had 24 records under our 'maybe include' category and a further 20 we were in conflict about whether to include or exclude. We discussed discrepancies between our application of the selection criteria in face-to-face meetings, and by mutual consensus arrived at a final selection of 612 'excluded'. We ended up with 31 records, 22 of them 'included' and nine of them categorised as 'maybe'. To resolve the nine records in the 'maybe' category, we examined their full-text records independently and we subsequently agreed to exclude six records found to be of the incorrect publication type – two conference papers and four theses. Our final number of included articles that met our criteria was 25. Figure 1 provides a summary of the records filtering process to arrive at our final number.

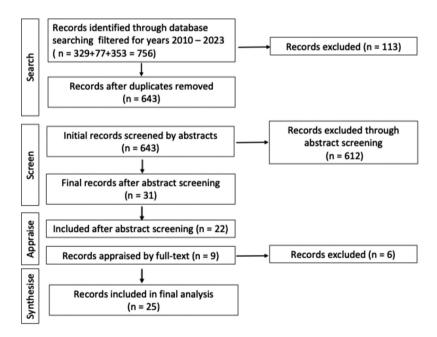


Figure 1. Flowchart for the searching and filtering process.

Next, we report on methodological features of the included publications, namely:

- The geographical and journal distribution of reported academic coaching studies in higher education, and in what journals are they published;
- Study designs (qualitative, quantitative or mixed; size of studies);
- Constructs measured (e.g. grades, retention, well-being, resilience);
- Data collection instruments used.

Geographical and journal distribution of the included articles

To contextualise the included academic coaching studies, we present the geographical distribution of the study locations for the included articles. Most were in the United State of America (14 articles, 56%), followed by five (20%) in European countries (two in Spain, two in the United Kingdom, one in Norway), three (12%) in the Middle East (two in Saudi Arabia, one in Israel), two (8%) in Canada, and one (4%) in South Africa.

The articles were widely distributed among different journals, listed in Table 2. Two articles were featured in each of six journals, while one was present in each of 13 journals.

Study designs

Most of the studies followed a quantitative approach (64%), with the least number of articles (12%) following a qualitative approach, two using surveys, one descriptive/ exploratory. Six studies (24%) used mixed methods with surveys.

The most common quantitative design was quasi-experimental (eight studies), followed by randomised control trials (five studies) and three descriptive non-experimental studies.

Table 2. Journals in which the included articles are published.

Journals	Number of records
Coaching: An International Journal of Theory, Research & Practice	2
Innovative Higher Education	2
International Journal of Evidence Based Coaching & Mentoring	2
International Journal of Mentoring and Coaching in Education	2
Journal of Postsecondary Education and Disability	2
About Campus	1
BMC Medical Education	1
BMC Psychology	1
Children and Youth Services Review	1
Community College Journal of Research and Practice	1
Education Sciences	1
International Coaching Psychology Review	1
Journal of College Reading and Learning	1
Journal of College Student Retention: Research, Theory & Practice	1
Journal of Higher Education Theory and Practice	1
Journal of Human Resources	1
Journal of Student Affairs in Africa	1
Medical Education	1
Nurse Education Today	1
Strategic Enrollment Management Quarterly	1

Auxiliary file, attached separately.

Nine studies (36%) used data from all participants, while 19 studies (76%) expanded their participant pool for comparisons with control or comparison groups. Participant numbers ranged from 10 700 with 5 350 (50%) receiving coaching (Price et al., 2021) to 7 with 3 (43%) receiving coaching (Torbrand & Ellam-Dyson, 2015). Details of all included studies are presented in Table 3.

Constructs measured

Our choice to include quantitative studies resulted in a wide variety of measures (or constructs) to gauge the effectiveness of academic coaching interventions. We grouped these constructs in four categories, shown in Figure 2.

- (a) 'Hard' performance measures such as grades, enrolment and retention statistics.
- (b) 'Soft' intrinsic measures relating more to personal changes, such as resilience, selfconfidence and psychological health.
- (c) Soft-skills such as time management, dealing with procrastination.
- (d) Other measures relating to the evaluation of the programme or that are broadly defined such as willingness to recommend the coaching programme and general academic success.

Data collection instruments

In addition to presenting the general methodological approaches, our study conducted a deeper analysis of the instruments used to measure the effectiveness of academic coaching interventions. Considerable variations in approaches were observed. Seven studies employed established scales and inventories such as the Metacognitive Awareness Inventory, the General Self-Efficacy Scale, the Strengths Knowledge Scale, the Depression and Anxiety Stress Scale (DASS-21), and the Psychological Well-Being Short. Conversely, seven other investigations devised their own measurement instruments, while seven others primarily relied on academic outcomes, predominantly the Grade Point Average (GPA), as a metric of effectiveness. Notably, one article relied solely on interview feedback, whereas for three articles, the methods for assessing effectiveness remained ambiguous.

Next, we describe the results from synthesising and analysing the included articles.

Results and discussion

One of the 25 included articles, Oreopoulos and Petronijevic (2018), reported on three different interventions, and another, Howlett et al. (2021), reported on two different interventions, making a total of 28 analysed intervention studies within the 25 included articles. The data below reports on the 28 included intervention studies.

To compare the effectiveness of the coaching interventions, we report on:

- Coaching format (individual or group);
- Coaching mode (in-person or distance via technology);
- Coaching topics;

Table 3. Key characterising features of coaching interventions.

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Record		Coaching					Coach time	Coach	
Number	Authors	format	Coaching mode	Coaching topics	Coach background	Student time	calculation	hours	Effective
-	Aboalshamat et al. (2020)	Individual	Distance (phone)	GROW model: goals, reality, outcomes, and wrap-up.	Near peer senior dental students who had intensive coaching training for one month by an expert coach.	Weekly, 5 hours in 5 weeks	1 hour/session x 5 sessions/student x 44 students	220	Partly
7	Aboalshamat et al. (2015)	Group	In-person lectures; Distance (programme booklet and audio CD)	Study skills, coping with challenges, self-efficacy and goals, time-management, increasing lecture time efficiency, how to study and memorise better, dealing with exams, religious Islamic teaching, muscle relaxation and positive messages.	Professional self-development coach and trainer (1st author).	10 hours in 2 days	10 hours in total	10	Partly
m	Alzen et al. (2021)	Individual	In-person	Co-construction of individualised plans that define goals and objectives that may include connections and campus resources, metacognition, motivation, reading and notetaking, test preparation and test-taking, time management, mindset, and wellness.	Professional full-time coaches in a College of Arts and Sciences academic advising unit.	Approx. every 2-3 weeks, 4-6 hours in 12 weeks	1 hour/session x 4 session x 526 students	2104	Yes
4	Atad and Grant (2021)	Individual	Distance (Zoom)	GROW model: set a goal (for the session), explore current realities, develop options for action, wrap-up of next steps and actions.	Near peer 2nd yr MBA students Weekly, trained as health coaches in 8 hou five half-day workshops, 12 we with weekly 1-hour training during intervention.	Weekly, 8 hours in 12 weeks	40 minutes/session x 12 sessions/ student x 88 students	704	Yes
٠,	Bellman et al. Individual (2015)		In-person; Distance (email; phone)	Strengths, goals, study skills, engagement, academic planning, and performance, with sessions tailored to the specific needs of each student.	Professional academic coach with over 10 years experience.	Weekly, 12 hours in 6 weeks	1 hour/session x 12 sessions/student x 41 students	492	Yes
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ic goals, and coaches, one clinically o daily and trained and had over 25 g. Manage years experience coaching physicians, resident improving physicians, and academics. Professional coaching physicians, and academics.	ong-term care term academ term academ term planning sors through r trive thinking, trive thinking, ion-making sign-making sign	In-person Create long-term career vision, set (assumed) short-term academic goals, and integrate goals into daily and long-term planning. Manage stressors through reframing negative thinking, improving time management, enhancing decision-making skills, energy conservation, addressing negative thoughts and failures.
idy skills, Upskilled course instructors. stress ning ades.	anagement, stuss to resources, sgement, upcoruments, and gr	In-person Time management, study skills, (assumed) access to resources, stress management, upcoming assignments, and grades.
	ional interviewi o-Active Life Co ising on managi and anxiety.	Distance Motivational interviewing applied (phone) via Co-Active Life Coaching focussing on management of stress and anxiety.
tive study Upskilled staff, training aligned vation. with the Co-Active coaching odel.	anagement, ac egies, and moti d on GROW mo	In-person Time management, active study strategies, and motivation. Based on GROW model.

Table 3. (Continued).

	Coaching format C	Coaching mode		Coaching topics	Coach background	Student time	Coach time calculation	Coach	Effective
Howlett et al. Online, no Distance (2021) personal (online coach videos, assignn	Online, no Dis personal coach	Distance (onlin video assigr	stance (online videos, assignments)	Goal setting, planning, time management, and organisation.	No personal coach, coaching only via online content.	4 modules, 4 hours in 6 weeks		1	Yes
Lefdahl-Davis Individual In-person et al. (2018) (assumed)	Individual In-	In-person (assumed)		Professional and personal thriving, life purpose, clarifying goals such as deciding on a major or making personal and professional decisions.	Professional nationally certified life coach accredited by the Center for Credentialing and Education.	Annually or more, 3-12 hours in 3 years	1 hour/session x 3 sessions/student x 94 students	282	Yes
Marino et al. Individual Distance (Zoom (2020) or Adobe)		Distance (Zoom or Adobe)		Goal completion, motivation, self- confidence, self-regulation, determination to succeed, and enhancing students' executive function abilities.	Near peer graduate students certified as special education teachers. Coach training included Universal Design for Learning, executive functions, and coaching best practices.	Average of 8 meetings of 1.5-4 hours in 12 weeks	169 minutes/ semester/student x 60 students	169	Yes
McDowall and Group In-person F Butterworth (assumed) (2014)	Group In-person (assumed)	(pə	ш	Facilitated group discussion on identifying strengths and how the identified strengths could be applied to individuals' goals.	Upskilled staff member with a M.Sc. in Occupational Psychology (2nd author).	1 hour (single session)	1 1-hour session	-	o N
Mitchell and Individual In-person G Gansemer- Topf (2016)	Individual In-person		O	Goal setting, assessing past strategies used by the student to identify what worked and why strategies did or did not work.	Professional academic coaches, qualifications unspecified.	1-2 sessions per month, 10-20 hours in 1 year	1 hour/session x 10- 20 sessions/ student x 59 students	882	Yes
Mogashana Individual In-person; C and Basitere and Distance (2021) group (WhatsApp messages)	Individual In-person; and Distance group (WhatsApp messages)	e App es)		Concepts of the mind, body, thoughts, emotions, and how all these relate to actions students take in line with achieving their goals; improving self-image, personal finance, and creating life visions.	Professional Life Coach and Neuro Linguistic Practitioner (1st author).	One weekend, two-weekly texts, ad- hoc on WhatsApp, 21 hours in 5 months	15 hours/session x 5 sessions +6 hours of WhatsApp communication	81	Yes

Table 3. (Continued).

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Coaching	-		-				Coach time	Coach	
Number	Authors	tormat	Coaching mode	Coaching topics	Coach background	Student time	calculation	hours	Effective
16	Oreopoulos and Petronijevic (2018)	Online module and text/ emails	Distance (online exercise, two-way text messaging on email or	Study habits, effective study strategies, using university resources, and coping with stress, motivation and encouragement.	Near peer upper-year undergraduate coaches.	Texts 2-3 times per week, 8.5 hours in 1 year	10 minutes/text message x 3 text messages/week x 24 weeks	12	o Z
16b	Oreopoulos and Petronijevic (2018)	Online, no personal coach	Distance (online exercise)	Study habits, effective study strategies, using university resources, and coping with stress.	No personal coach, coaching only via online content.	Single session, 2.5 hours		ı	o N
16c	Oreopoulos and Petronijevic (2018)	Individual	In-person; Distance (Skype; phone)	Questions about campus locations, booking appointments with counsellors, selecting majors, getting jobs on campus, specific questions about coursework, and feelings of nervousness, sadness, anxiety.	Near peer upper-year undergraduate coaches.	Self- arranged meetings, 26.5 hours in 1 year	1 hour/session x 24 sessions/student x 24 students	576	Yes
71	Pechac and Slantcheva- Durst (2021)	Individual and group	In-person; Distance (emails; phone)	Reviewing course syllabi, course selection, degree planning, connecting students to oncampus tutoring services, providing academic support, financial aid, career planning, personal and emotional support, and administrative subport.	Professional: AmeriCorps College Completion Coaches.	1-3 hours in 12 weeks	1-to-1 consultations (5979 hrs), classroom visits (4990 hrs), email/ phone (10 min each, 208 hrs), small groups (384 hrs).	11561	Partly
81	Price et al. (2021)	Individual	In-person; Distance (email and text on first day)	Connect students to other key supports and resources on and off campus, follow up on next steps with students, use predictive analytics of performance and attendance tracking to identify at-risk students.	Professional college-employed coaches, most with Masters' degrees and community service experience.	Semesterly, 4 hours in 2 years	1 hour/session x 4 sessions/student x 5350 students	21400	Yes

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Record		Coaching	:	:			Coach time		
Number	Authors	format	Coaching mode	Coaching topics	Coach background	Student time	calculation	hours	Effective
19	C. Robinson and Gahagan (2010)	Individual	In-person (assumed)	Strengths, goals, study skills, engagement, academic planning, and performance; reflection on strengths related to academics and working to try new study strategies.	Professional coaches employed by the Academic Centers of Excellence (ACE) Office at the university.	1-3 sessions per year, 1-3 hours in 1 year	1 hour/session x 2 sessions/student x (182 + 218) students	800	Yes
20	Rodríguez Fuentes et al. (2023)	Individual and group	In-person; Distance (personal journaling)	Self-knowledge, understanding change, decision-making, goal formulation, values awareness, resource identification, action plans, addressing obstacles, empowering beliefs, longlasting motivation, feedback, goal achievement, celebration.	Professional coach with specific training and experience.	One group session then self- paced journalling, 24 hours in 4 weeks	2 hour group session + 22 activities × 1 hour/activity	24	Yes
21	Rodriguez Ott Individual et al. (2020)	Individual	In-person; Distance (email; phone; text messages)	Developing the skills necessary to excel in community college.	Professional coaches, part of InsideTrack Coaching.	Once or more, 1-2 hours in 12 weeks	1 1-hour session/ student x 699 students	669	Yes
22	Saethern et al. Individual (2022)	Individual	In-person	Self-regulated learning strategies, such as goal setting, time management, motivation, study techniques. mastering the curriculum, feeling overwhelmed, dealing with low academic self-efficacy.	Professional qualified coach with two years' experience who was an assistant professor in the Faculty of Health, Welfare and Organisation.	Two-weekly, 7 hours in 12 weeks	1 hour/session x 7 sessions/student x 14 students	86	Yes
23	Sepulveda et al. (2020)	Individual	In-person (assumed); Distance (email; phone)	Understand factors influencing stay-or-leave decision, provide resources, referrals, and conversations to guide decision-making and support student success, review steps taken since the last meeting, prioritise needs, coach students to take action.	Upskilled staff members at the 3 hours in institution.	3 hours in 1 year	1 hour/session x 3 sessions/student x 46 students	138	Partly

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Record Number	Authors	Coaching format	Coaching mode	Coaching topics	Coach background	Student time	Coach time calculation	Coach hours	Effective
75	Torbrand and Group Ellam-Dyson (2015)	Group	In-person	Challenging negative thinking patterns, maladaptive perfectionism, anxiety, fear of failure, and rejection; increase motivation, release potential, and enhance self-awareness. RE-GROW: Reviewing and Evaluating new learning and actions completed since the last session, setting Goals, reflecting upon Reality, discussing desired Options, Wrap-up, setting new weekly reflections (or sub-goals).	Upskilled further education teacher trained in Cognitive Behavioural Coaching.	4 weeks	1 hour/session x 4 sessions/student x 3 students	12	Yes
25	Vanacore and Individual Dahan (2021)	Individual	In-person	Referral for campus services, such Professional Learning as tutoring, counselling, Specialist in the unadvising, the Career Center; Learning Center. encourage students to think about how they can get more involved in college life, foster a sense of belonging.	Professional Learning Specialist in the university's Learning Center.	Twice a month, 7 hours in 12 weeks	1 hour/session x 7 sessions/student x 287 students	2009	Partly

See Excel spreadsheet or PDF (4 pages).

Figure 2. Constructs for measuring effectiveness of academic coaching interventions.

Coach background:

Dealing with procrastination

Duration and frequency of coaching.

Table 3 describes the key characterising features of each of the 28 coaching interventions: coaching format (individual or group), coaching mode (in-person or distance via technology), coaching topics, coach background, duration and frequency of coaching. Based on the criteria for intervention success chosen by each study's authors, we classified interventions as effective (for example, statistically significant improvement over control groups, positive evaluations of coaching by participants), partly effective (for example, mixed results, improvements too small to be statistically significant) and ineffective. In Table 3, dark shading is used to show interventions assessed as ineffective, light shading for partly effective interventions, and effective interventions are left unshaded. Summaries of the distributions of key features across effective, partly effective and ineffective interventions are discussed in the following sections.

Coaching formats

Most coaching interventions (18/28 or 64%) were individual, one-to-one sessions between a student and a coach. Four interventions used both group and individual coaching, and three only used group coaching. Three interventions used no personal contact with a coach and were delivered through online modules, individually accessed by students. We found that every intervention using individual coaching, regardless of whether it was combined with group coaching or not, was effective or partially effective. This suggests a strong potential for personalised, one-on-one coaching to positively impact student outcomes.

Coaching mode

Apart from in-person coaching, which was the most prevalent mode, coaching also occurred through a mix of in-person coaching and email, telephone, text messaging, WhatsApp, personal journaling, booklet and audio CD. Online interventions used videos, online exercises, online video conferencing, and a combination of online exercises and text messages. Coaching took place entirely via telephone in two interventions and via online video conferencing in two other interventions. Five studies did not specify the mode of coaching and interventions were assumed to be in-person. Regarding effectiveness, three studies were ineffective: one was assumed to be in-person; one was completely online without interaction opportunities; one was online with two-way text and email messages from a team of upper-year undergraduate coaches.

Coaching topics

Table 3, presented earlier, summarises the coaching topics for each intervention. Common topics include:

- Academic skill development, including study habits improvement, effective study strategies, and time management techniques;
- Coping strategies for stress and stress management techniques;
- Topics related to goal setting and goal achievement;
- Using university resources effectively;
- Relationship building and personal support for students;
- Provision of encouragement, motivation, and empowerment to students;
- Strategies for dealing with exams and test preparation.

Only one intervention (McDowall & Butterworth, 2014) focussed on a single topic, namely identifying and applying character strengths, and this intervention was ineffective.

Coach backgrounds

As detailed in Table 3, many coaches had additional qualifications, such as in neuro-linguistics, cognitive behaviour, occupational psychology, Universal Design for Learning, and co-active coaching. Some coaches were trained through programmes such as InsideTrack and AmeriCorps College Completion. Figure 3 shows the coaching backgrounds grouped into four main categories: Professional coaches (15 studies, none ineffective), near peers (six studies, one ineffective), upskilled staff (five studies, one ineffective), and coaching only through online content (two studies, one ineffective).

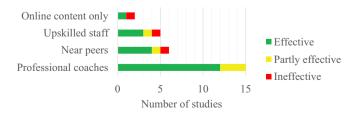


Figure 3. Coach background and intervention effectiveness.

An observation we make from Figure 3 shows a noteworthy trend: the 15 interventions led by professional coaches were all effective or partially effective, while interventions solely delivered by online content had the lowest proportion of effective interventions (1/2). This observation suggests the reduced success of asynchronous engagements such as online exercises, compared to synchronous interactions led by a coach. This observation aligns with our earlier findings, where interventions delivered through online exercises were ineffective. Interestingly, the involvement of near peers and upskilled staff did not show a clear pattern, prompting us to consider an alternative variable – the time invested in student engagement.

Duration and frequency of interventions

We explored if there is a minimum time that should be spent on an intervention, and if longer interventions are more effective than shorter ones. The variables examined were the number of participation hours for individual students, the duration or span of time

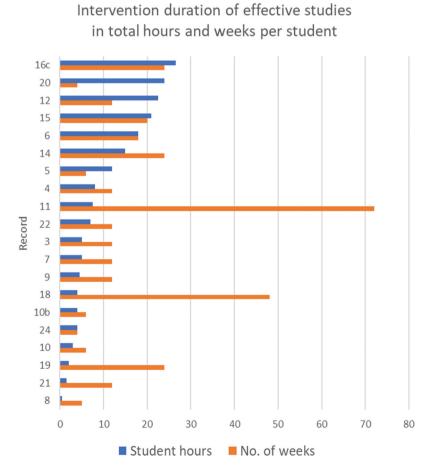


Figure 4. Duration and frequency for effective interventions.

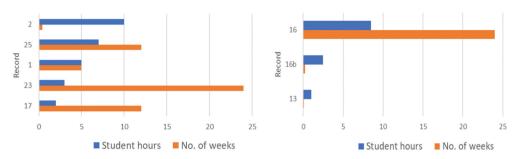


Figure 5. Duration and frequency for partly effective interventions (left) and ineffective interventions (right).

over which these participation hours were spread, and the staff contact hours required to implement interventions.

Only half of the interventions that required students to participate for 0.5–3 hours and 7–10 hours were effective. The seven longest interventions (comprising 25% of the total of 28 interventions) required 12 or more hours each and were all effective. A short intervention does not imply ineffectiveness, since 13 of the 20 effective interventions (65%) were shorter than 10 hours. However, it is noteworthy that all the interventions with 12 hours or more of student participation were effective.

The time over which an academic coaching intervention took place, called the duration of the intervention, was measured in weeks. To account for studies where the length of a semester was not specified, all interventions of one semester duration were equated to 12 weeks. We found that an intervention needed to be at least four weeks long to be effective. The longest intervention provided academic coaching to the same students for three years and was effective.

Combined views of the student participation hours and the duration of interventions in weeks for effective, partly effective and ineffective interventions are shown in Figures 4 and 5. The bars are equal in length if the number of student hours equals the number of weeks over which the intervention occurred, where 12 weeks represents one semester. For example, in study 6, the 18 participation hours per student were spaced over approximately 18 weeks. A longer top bar indicates more intense interventions than one hour per week, whereas a longer bottom bar indicates a less intense intervention. Only two interventions, 11 and 18, had durations greater than two years (24 months), and both were effective.

Conclusion

To our knowledge, this systematic review is the first to establish what is currently known about the effectiveness of academic coaching interventions in higher education and their impact on student success and well-being. The included studies were published in peer-reviewed English-language journals between 2010 and May 2023 and focused on academic coaching interventions for undergraduate students occurring in a higher education context, where outcomes from the intervention were reported.



The methodologies used in the studies were predominantly quantitative (64%), with some mixed methods (24%) and qualitative (12%) studies. Adding to the difficulty in measuring the effectiveness of coaching, some studies measured coaching effectiveness using existing data collection tools (e.g. psychometric scales), whereas others used selfdesigned tools. Four categories of assessment constructs were identified: hard (e.g. grades, retention statistics); soft (e.g. resilience, self-confidence); soft-skills (e.g. time management, dealing with procrastination); and other measures (e.g. willingness to recommend the coaching programme and general academic success).

We analysed various formats of coaching interventions:

- individual or group coaching;
- in-person or distance via technology;
- coaching topics;
- coach background and level of training;
- duration and frequency of coaching.

Limitations

We employed strict exclusion criteria to ensure clarity in reporting. However, this approach led to the omission of studies from conferences, theses, and grey literature, potentially limiting the scope of our findings. Additionally, the scarcity of ineffective interventions prevents us from drawing definitive conclusions. Furthermore, the predominance of American studies draws attention to the need for more international research to provide a comprehensive understanding of coaching's impact. The absence of standardised assessment tools also presents a challenge, as it reduces the comparability and generalisability of findings. While introducing such tools could establish best practices, it risks oversimplifying the multifaceted nature of coaching. Lastly, the diverse range of coaching approaches and contexts observed in our study suggests that recommendations must be tailored to fit local circumstances, for example, negotiating the use of class time for coaching where lecturers are willing.

Implications

We offer four insights for decision-makers in universities and colleges seeking to support student success and improve retention. First, the review findings show that the duration of interventions is an important factor. Our analysis indicates that 12 hours or more of academic coaching over at least 4 weeks may be necessary as a standard. Interventions that are 10 hours or less may have a lower chance of being effective.

Second, focussed attention from one-on-one coaching, whether online or in-person, is more effective than group coaching or self-accessed online coaching.

Third, the review underscores the importance of considering who delivers the coaching. Our findings indicate that interventions led by professional academic coaches, college-employed coaches, or full-time coaches tend to be more effective than those facilitated by graduate students, near-peer coaches, or conducted solely through online exercises. This consideration leads to the fourth aspect for decisionmakers: the cost implications of coaching interventions. Especially when external

professional coaches are viable, decision-makers must balance the cost against affordability, factoring in the intervention's duration. If the cost is too high for external coaches, exploring the upskilling of academic staff for implementation becomes crucial. However, we caution against overburdening academic staff with coaching responsibilities unless they are relieved from other academic duties, as accountability without such relief may pose challenges. Nonetheless, upskilling academic staff can hold intrinsic value, benefiting students beyond specific coaching interventions.

In conclusion, by characterising effective academic coaching interventions for undergraduate students, this systematic review offers insights for implementing academic coaching interventions in higher education. It highlights the significance of intervention duration and coach selection, which impact costs. Institutions are encouraged to consider these factors to enhance academic success, well-being, and retention.

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