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DOES PUBLISHING DURING THE DOCTORATE INFLUENCE COMPLETION TIME? A QUANTITATIVE STUDY OF DOCTORAL CANDIDATES IN AUSTRALIA

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ABSTRACT

Aim/Purpose	This paper investigates the association between publishing during doctoral candidature and completion time. The effects of discipline and of gaining additional support through a doctoral cohort program are also explored.
Background	Candidates recognize the value of building a publication track record to improve their career prospects yet are cognizant of the time it takes to publish peer-reviewed articles. In some institutions or disciplines, there is a policy or the expectation that doctoral students will publish during their candidature. However, doctoral candidates are also under increasing pressure to complete their studies within a designated timeframe. Thus, some candidates and faculty perceive the two requirements – to publish and to complete on time – as mutually

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exclusive. Furthermore, where candidates have a choice in the format that the PhD submission will take, be it by monograph, PhD-by-publication, or a hybrid thesis, there is little empirical evidence available to guide the decision. This paper provides a quantitative analysis of the association between publishing during candidature and time-to-degree and investigates other variables associated with doctoral candidate research productivity and efficiency.

Methodology	Multivariate logistic regression analyses were used to examine the predictors (discipline [field of research], gender, age group, domestic or international student status, and belonging to a cohort program) of doctoral candidate research productivity and efficacy. Research productivity was quantified by the number of peer-reviewed journal articles that a candidate published as a primary author during and up to 24 months after thesis submission. Efficacy (time-to-degree) was quantified by the number of Full-Time Equivalent (FTE) years of candidature. Data on 1,143 doctoral graduates were obtained from a single Australian university for the period extending from 2000 to 2020. Complete publication data were available on 707 graduates, and time-to-degree data on 664 graduates. Data were drawn from eight fields of research, which were grouped into the disciplines of health, biological sciences, agricultural and environmental sciences, and chemical, earth, and physical sciences.
Contribution	This paper addresses a gap in empirical literature by providing evidence of the association between publishing during doctoral candidature and time-to-degree in the disciplines of health, biological sciences, agricultural and environmental sciences, and chemical, earth, and physical sciences. The paper also adds to the body of evidence that demonstrates the value of belonging to a cohort program for doctoral student outcomes.
Findings	There is a significant association between the number of articles published and median time-to-degree. Graduates with the highest research productivity (four or more articles) exhibited the shortest time-to-degree. There was also a significant association between discipline and the number of publications published during candidature. Gaining additional peer and research-focused support and training through a cohort program was also associated with higher research productivity and efficiency compared to candidates in the same discipline but not in receipt of the additional support.
Recommendations for Practitioners	While the encouragement of candidates to both publish and complete within the recommended doctorate timeframe is recommended, even within disciplines characterized by high levels of research productivity, i.e., where publishing during candidature is the “norm,” the desired levels of student research productivity and efficiency are only likely to be achieved where candidates are provided with consistent writing and publication-focused training, together with peer or mentor support.
Recommendations for Researchers	Publishing peer-reviewed articles during doctoral candidature is shown not to adversely affect candidates’ completion time. Researchers should seek writing and publication-focused support to enhance their research productivity and efficiency.
Impact on Society	Researchers have an obligation to disseminate their findings for the benefit of society, industry, or practice. Thus, doctoral candidates need to be encouraged and supported to publish as they progress through their candidature.

Future Research The quantitative findings need to be followed up with a mixed-methods study aimed at identifying which elements of publication and research-focused support are most effective in raising doctoral candidate productivity and efficacy.

Keywords cohort program, completion, doctorate, research productivity, time-to-degree

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Melissa Crowe, PhD is the Head of the Cohort Doctoral Studies Program in the Division of Tropical Health and Medicine at James Cook University. Melissa has 13 years experience working in research education and a total of 25 years experience teaching in the tertiary sector. Melissa is enthusiastic about improving the higher degree by research experience and supporting research candidates to completion.



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Rhondda Jones, PhD, is an Emeritus Professor in the Division of Tropical Health and Medicine at James Cook University. She is a population ecologist and biostatistician and also provides statistical support and training to postgraduate research students.