

# architecture institutions and change

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## Structuring Space for Student Life: John Dalton's 1970s Campus Commissions

*This paper investigates the way in which a rethinking of pedagogical philosophies during the 1960s and 1970s might have informed the architecture of the educational institutions themselves. It will describe four projects from the office of John Dalton Architect and Associates on campuses of higher education in South East Queensland that resulted from the rapid expansion of the sector in the 1960s in Australia and that embody the spirit of innovation within the sector at that time.*

*These works – which include the Art, Craft and Music Teaching Building (1970-74) at the Darling Downs Institute of Advanced Education; University House (1972) at Griffith University, Campus Nathan; the Halls of Residence at Kelvin Grove Teachers Training College (1974); and the Bardon Professional Development Centre (1975) – explore architectural solutions for models of education introduced into Queensland in the 1970s and reveal Dalton's interest in place, in the idea of community and in the capacity of architectural form to structure social and educational interactions. In each project, the figure of courtyard is utilised as the device for addressing the specific needs of a particular community of users.*

*Comparison with the campus buildings of Robin Gibson and James Birrell demonstrates the extent to which Dalton offered an alternative model for campus buildings. But their restrained, anti-institutional character meant this aspect of Dalton's works remained unrecognised and the projects are accounted for in terms of their contribution to the idea of the north Australian 'house' rather than to institutional architecture.*

Rapid growth in the post-war period prompted the expansion and restructuring of the tertiary education sector in Australia. New university campuses were planned, existing colleges were elevated to tertiary level and new institutions offering new types of courses were created<sup>1</sup> presenting astute architects and planners with the opportunity to test new ideas and thinking in an educational context receptive to change.<sup>2</sup> Initially this expansion was simply concerned to address the pragmatic needs of business and industry. But by the 1970s, prompted by developments in the UK in the 1960s, it was accompanied by the notion that educational institutions should extend the intellectual powers and social capacity of students rather than simply transfer knowledge and technical skills and that central to this was students' active participation in the life of a community and in their own educational process. Of concern here is the extent to which architecture's emerging 'social orientation,'<sup>3</sup> intersected with the exploration of new pedagogical approaches to create new institutional models and whether this reflected a recalibration of modernism rather than its rejection.<sup>4</sup>

This paper identifies four campus buildings completed by John Dalton Architect and Associates in Queensland between 1971 and 1976, which were commissioned as a direct consequence of changes in the education sector and which are ambitious in Queensland terms, in addressing some of the emerging issues in architecture. Dalton, who was a part-time lecturer at the University of Queensland, was also familiar with contemporary pedagogical thinking through Paul Ritter's 1964 book, *Educreation: Education for Creation, Growth and Change*.<sup>5</sup> His campus commissions include the Art, Craft and Music Teaching Building at the Darling Downs Institute of Advanced Education (DDIAE) (1971-74) completed in association with Queensland Public Works<sup>6</sup>; University House (1972) at Griffith University; the Kelvin Grove Halls of Residence (1974) at the Kelvin Grove College of Advanced Education also in association with Queensland Public Works<sup>7</sup>; and the Bardon Professional Development Centre (1977-2014) also in association with Queensland Public Works.<sup>8</sup> All four commissions were for educational buildings for which no precedent existed in Queensland, on new campuses or campuses in transition. Despite being recognised through the Royal Australian Institute of Architects Queensland Chapter awards program at the time, these buildings were not highly regarded by colleagues. Jennifer Taylor describes University House, the Halls of Residence and Bardon Professional Development Centre in terms of their relaxed atmosphere and responsiveness to climate in *Australian Architecture Since 1960* and the Halls of Residence are included in Haig Beck's *International Architect* edition *Detailing, National Identity and a Sense of Place in Australian Architecture*, but apart from these instances, Dalton's institutional projects have not been critically reviewed.<sup>9</sup>

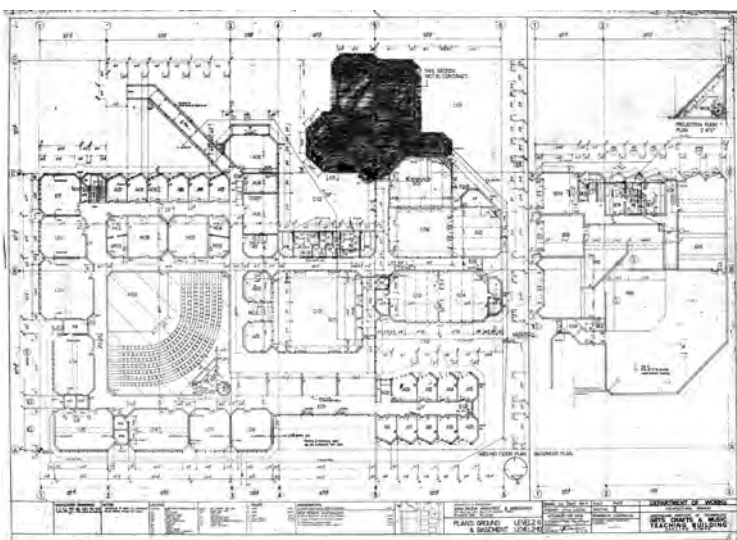
Analysis of the first and least well-known of the four campus buildings, the Art, Craft and Music Teaching Building at the DDIAE, reveals attention to the specific needs of a community of art practice; to issues of human scale; a willingness to experiment with materials and form; and the conscious fitting of a building to its landscape context. These preoccupations are expressed through the deployment of a planning strategy involving courtyards, not as symbolic or emblematic of an educational typology with origins in the monastery cloister, but understood as a spatial figure expressing the needs of a community of people coming together for the express purpose of learning. Comparison with other

campus buildings by Dalton reveals the courtyard to be a recurring spatial figure whilst a comparison with contemporaneous campus projects by peers including James Birrell and Robin Gibson demonstrates the extent to which Dalton's restrained architectural solution at DDIAE sits in contrast with the more orthodox modern solutions of his peers. This contrast in architectural approach mirrors the tension between progressive and conservative forces within Queensland's education sector and the architectural community.

1

Darling Downs' citizens had agitated for some time for a distinct tertiary education facility capable of expressing their aspirations. The creative arts, in particular the performing arts, were from the outset recognised as central to achieving this ambition.<sup>10</sup> The opportunity arose in 1971, when the Darling Downs Institute of Advanced Education, which from 1965 was a satellite institute of the Queensland Institute of Technology, was granted its autonomy.<sup>11</sup> John Dalton was commissioned to design the Art, Craft and Music Teaching Building. Progress on the project stalled during which dilemmas regarding the educational focus of the art and music school were resolved by separating out the more vocationally oriented teacher training and creating a School of Arts dedicated to general studies in the performing and creative arts. In 1973 construction commenced on the Art, Craft and Music Teaching Building or 'A Block' as it came to be known.

'A Block' occupies a highly visible site adjacent to the ceremonial approach on the south east edge of the DDIAE campus, which at the end of the 1960s was on the outskirts of Toowoomba overlooking farmland. Dalton's design report indicates that design was preceded by period of research during which painters, potters, musicians and dramatists provided advice on a range of practical matters including "the type of environment required for the teaching process."<sup>12</sup> The preferred strategy was to contain all teaching and performance spaces, classrooms and offices for each of the various discipline areas in one building, thereby giving expression to a philosophy that encouraged interaction between different disciplines.



**Fig. 1** Art, Craft and Music Teaching Building, John Dalton Architect and Associates in association with Queensland Department of Public Works. Ground and basement plan construction drawing dated 1971. © University of Southern Queensland.

Each discipline was organised around a courtyard. Dalton's design report lists five courtyards; an entry courtyard and one each for pottery, craft, sculpture, and painting. The largest volume and major space in the complex, the 250 seat theatre, is equivalent to a sixth courtyard in the way it gathers ancillary spaces to itself, and a service yard, sunken below the level of the surrounding landscape out of view of approaching vehicles, could be considered as a seventh courtyard. Noteworthy too, is the configuration of rooms. Right angles and cube volumes are avoided, corners are truncated or dissolved to create a matrix of 'irregular' spaces that supposedly 'reflects' the 'creative spirit' of the building's occupants.<sup>13</sup>

Courtyards in 'A Block' respond to the practical needs of the creative and dramatic arts for flexible back-of-house space and of the new pedagogy for 'break-out' teaching spaces. They have been deliberately scaled to create intimate teaching spaces and are not linked with other outdoor spaces on the campus or the rolling Downs landscape beyond. What results is an internalised plan creating a series of inwardly focused territories for each discipline whereby, as the current Dean of Arts describes, "the visual artists overheard music practice and drama students had to occasionally shout to be heard above students playing the piano ... Life in the building was always a lot of fun."<sup>14</sup> It was a hot-house situation, which it was hoped would lead to new and hybrid practices in the arts. As an outdoor room, the courtyard gives presence to a series of communities of learning and reinforces a democratic, non-hierarchical, cross-disciplinary and multidisciplinary approach to curriculum. That the practicalities of student need were given priority over the expression of the architecture is consistent with Dalton's stated "conviction" "that a strong and organic building should be suited to the programme."<sup>15</sup>

Students' needs were accommodated in other practical ways. In his design report Dalton writes:

It was found that the consensus of opinion was the building itself should be built of materials that are representative of the craft methods, and that the clinical synthetic appearance should be avoided. The internal environment should respond to the activities that take place within the building and that precious and refined finishes should be anathema to the creative artists.<sup>16</sup>

Accordingly, 'A Block' is constructed primarily of concrete. Internally, white painted off-form concrete allowed students to fix materials and equipment to walls directly without restriction. Externally, the use of corrugated off-form concrete results in a 'robust' and 'expressive' character. Pre-cast concrete hoods over doors to the theatre at the lower level are integral with the walls and also corrugated. The building appears to emerge out of the ground. It is clear from Dalton's notes and letters that in terms of formal expression, 'A Block' was to be more landscape than building.<sup>17</sup>

Views from within the campus further reveal the extent to which 'A Block' appears as being of the rolling Downs landscape.<sup>18</sup> Any potentiality for it to be dominated by the unwieldy volume of the working theatre was reduced by pressing the building form into the ground.

Correspondence between Dalton and Head of Visual Arts Robert McGowan reveals the flat concrete roof was initially proposed as a green roof to be 'frolicked' upon,<sup>19</sup> an idea critical to conveying coherently the buildings intentions but one which was vetoed by the Queensland Department of Public Works. Notwithstanding this disappointment, the roof edged by [and possibly redundant] deep concrete fascias with integral gutters, provides a horizontal datum that mirrors the horizon line of the Downs and unifies the diverse elements of plan.



**Fig. 2** View over 'A Block' to Darling Downs farm landscape, 1974. Photograph courtesy of Suzanne Dalton.

Paul Walker has noted that contemporaneous accounts of campus architecture typically implicate architecture in notions of identity in which built form is seen as being representational of or analogous to landscape.<sup>20</sup> In this instance Dalton is not concerned in a self-conscious way with registration of an Australian identity but with how building form is experienced as being integrated into its landscape setting. Close attention to creating an appropriate setting for the creative arts and fit with site has resulted in a low-key, if ungainly, architectural solution.

In comparison, the Resource Materials Building at Darling Downs Institute of Advanced Education by James Birrell and Partners, which was awarded a meritorious citation in the same round of awards as the Art, Craft and Music Teaching Building by Dalton, is a conventional solution to the problem of a library in an educational institution. The Science Block by Nutter and Charlton, also commissioned in 1971, is a functional, corridor down the middle, expressed concrete post and beam class-room block with its long axis oriented east-west and sun-shades on north and south facades – a generic, institutional building in the modern idiom.

Another contemporaneous building, the Library, Arts, Crafts, Music and Students Union complex at Mt Gravatt College of Advanced Education designed by Robin Gibson and Partners in association with Works Department (1969-76)<sup>21</sup> addresses a similarly varied program to that of the Art, Craft and Music Teaching Building at DDIAE. Because it was primarily for vocational teacher training, Gibson's commission avoided the ambitious creative

arts agenda of the Art, Craft and Music Teaching Building at DDIAE and although it housed the campus' student services facilities, it was not complicated by aspirations to foster links with the broader community. Completed in stages over a number of years, the different programmatic functions are housed in a series of undifferentiated buildings that enclosed the courtyard and are united by a single architectural expression in which an upper level, comprising precast white concrete horizontal panels and vertical structural fins, hovers over a recessed lower level. The complex sits in opposition to its bushland setting.<sup>22</sup> Its single courtyard operates at the scale of the campus rather than at the scale of a classroom group. Teaching spaces are generic and not tuned to specific user needs. The Library, Arts, Crafts, Music and Students Union is a fine but conventionally functional response to an institutional brief in the ubiquitous modern idiom for which 'Gibbo' became renowned.<sup>23</sup> These buildings do not demonstrate a comparable attention to the specifics of program or the surrounding environment.

Without its daisy covered roofscape and ivy covered walls, the Art, Craft and Music Teaching Building assumed an awkward, uncared for air, prompting correspondence between Dalton and the Head of Visual Arts, Robert McGowan. McGowan was quick to point out that the building was a strong force in student's lives and constantly 'humming' with student activity.<sup>24</sup> The building did not resonate, however, with more conservative forces within Queensland Public Works. Future campus commissions from this body were for projects where a domestic scaled building was the desirable solution, whereas Gibson would be commissioned to do more work on the Mt Gravatt campus. Dalton's peers, when reflecting on this era, argued that Dalton's campus projects "didn't have the qualities that made [him] influential".<sup>25</sup>

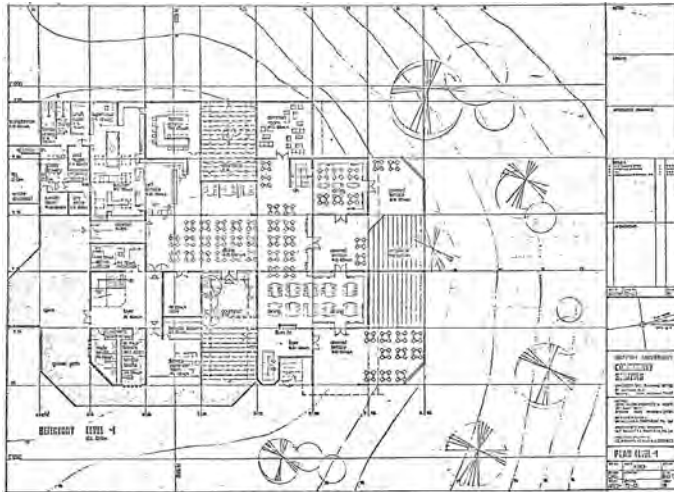
John Dalton, when he got into bigger work, ... it just didn't come out, it didn't – particularly the university up at Toowoomba.<sup>26</sup>

The ungainly presentation of the DDIAE Art, Craft and Music Teaching Building, its small (human) scale, and non-institutional expression possibly contributed to any social and pedagogical ambitions being overlooked.

## 2

Dalton's three other campus buildings received more positive reviews but were nowhere near as ambitious in terms of their intentions. All three employed the courtyard spatial figure. University House, Griffith University, was specifically commissioned to enable the formal and informal socialising of staff and students, reflecting the radical, 'flat' organisational structure proposed for that university.<sup>27</sup> In reflecting this social orientation and in comparison with the Art, Craft and Music Teaching Building, courtyards and decks at University House are open and transparent allowing exchanges between people and between people and the wider environment. Courtyards draw light, breezes and the wider landscape context deep into the building's spaces. At University House, the modernist language of form agreed between Dalton and Gibson, whose Library and School of Humanities Building is adjacent,

owes more to Gibson's architectural oeuvre than Dalton's. In comparison, Dalton's last two campus projects, the Bardon Professional Development Centre and the Kelvin Grove Halls of Residence, both completed in association with Department of Public Works, are more typical of Dalton's practice, deploying a language of form derived from Dalton's residential work.



**Fig. 3** Plan, University House, Griffith University, 1972, John Dalton Architect and Associates in association with Griffith University Site Planning Office. © Griffith University.

The Bardon Professional Development Centre is a stand-alone facility for the post-graduate retraining of teachers – a ‘Scholars Village’ – located in a suburban setting at the base of Mt Coot-tha.<sup>28</sup> Characteristically Dalton forms – white walls, dark timbers and crippled roofs – are organised along the contours of the gently sloping site and linked by a series of diagonal pergola covered pathways. Practically, the resulting courtyards accommodate changes of level, planting and are devices for achieving desired comfort levels to adjacent internal spaces. But they were also envisaged as spaces for incidental exchanges and planned activities “promoting the exchange of ideas.”<sup>29</sup>



**Fig. 4** Amphitheatre courtyard, Bardon Professional Development Centre, 1977. Photograph courtesy of Suzanne Dalton.



The Kelvin Grove Halls of Residence engages with the courtyard figure more loosely. The Halls of Residence, intended as a residential college for trade based apprenticeship release programs<sup>30</sup>, was located on the fringe of the Kelvin Grove College of Advanced Education campus. As a means of fitting-in with its suburban context and to avoid “the ‘harsh’ design of the educational institute” Dalton, again, adopted the archetypal hill-town or village idea.<sup>31</sup>

The complex comprises five groupings of ‘maisonettes’ around a community building. Courtyards are created through the gathering of ‘maisonettes’ into informal ‘family’ groupings such that “plants and the spaces between are as important as the building themselves.”<sup>32</sup> In his design report Dalton writes:

Site conditions and the requirements of the brief have indicated a building well integrated with the surroundings and providing the essentials for community involvement within the complex. The whole could be described as a village within the urban environment which should stimulate social activities as well as providing the essential retreats for the individual.<sup>33</sup>

For Dalton, the courtyard had become a recurring spatial figure.<sup>34</sup> Dalton’s recurring use of the courtyard figure is not emblematic or symbolic. In each of these four campus buildings the courtyard figure arises from careful analysis of the explicit and implicit needs of users. Drawing from a range of sources including Wilhelm von Humboldt, psychologist Terence E. Lee, Christian Norberg Schultz and Christopher Alexander, Philip Drew constructs a case for thinking about spatial figures as spatial schema, that is as ‘mental images’ or ‘mental structures,’ forming a pattern language representing the “space we inhabit,” which, when drawn on to generate form, provide conditions for “future behaviours in the environment.”<sup>35</sup> When negotiated against the specific circumstances of program and context, this process gives rise to a range of different outcomes despite a similarity in the expression arising from the frequent use of the characteristic Dalton section and palette of materials. In each situation, the courtyard embodies Dalton’s aspirations for a community of users, and extends to consideration of incidental or unexpected use. The careful tuning of scale, thoughtful disposition of component elements and material selection suggests that Dalton conceived of his courtyard spaces in this way; as spatial schema embodying “future behaviours” not just formal devices satisfying functional programmatic need.

## Conclusion

Each of Dalton’s campus buildings extends the functional brief for an institutional building to address a set of social behaviours associated with a new educational model or pedagogical philosophy. Each demonstrates a reorientation of mid-century Queensland modernism to address notions of community. All have been largely overlooked for critical review and with the exception of the Art, Craft and Music Teaching Building at DDIAE, time has not been kind to them. Three of Dalton’s campus projects have been partially or fully demolished or unsympathetically refurbished, in response to shifts in educational policy or the failure of the social and pedagogical philosophies underpinning a project’s inception in the first

place. Griffith University's flat hierarchical structure was not sustained through the 1980s. Increasing student numbers resulted in the open plan social spaces being subdivided into offices for an expanding range of student services, and the building was painted salmon pink. After its acquisition by Queensland University of Technology in 1993, the Kelvin Grove Halls of Residence remained as student housing until 2000, at which time the site became part of a redevelopment plan. The complex was listed on the Queensland Heritage Register in May 2001 but demolition of three clusters was approved by Council in 2002. The remaining buildings currently lie empty, isolated from their suburban context in the middle of an expanding 'urban village' campus. The Bardon Professional Development Centre, which was sold by the Queensland Education Department in the late 1990s and saved from demolition on at least two occasions since, was demolished in 2014 to make way for medium density housing. 'A Block' continues to accommodate the entire School of Creative Arts based on the Toowoomba campus of the University of Southern Queensland. Its refurbishment in 2011 consisted of the introduction of air-conditioning, upgrading of computer and digital technology, the installation of a new roof and the reconditioning of teaching spaces and offices. It did not involve the reconfiguration of spaces and spatial relationships indicating the enduring nature of the building's strategies, their fit with intended purpose and responsiveness to change and hence the appropriateness of the courtyard schemata in providing a meaningful environment for a community of users over time.

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- 1 Greg Logan and Eddie Clarke, *State Education in Queensland: A Brief History* (Brisbane: Policy and Information Services Branch, Department of Education, Queensland, 1984), 14.
  - 2 The consequences for architecture and planning of expansion within the education sector have been addressed in a number of recent papers. See Philip Goad, "Open Field, Open Street, Open Choice: John Andrews and the South Residences, University of Guelph (1965-68)," in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open*, ed. Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013), vol. 2, 639-650; Susan Holden and Jared Bird, "An Open Plan: Campus Plan, 1966-1973," *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open*, ed. Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013), vol. 2, 723-736. New thinking in architecture was addressed locally at the time at conferences including The Consequences of Today, RAlA Centenary Convention, Sydney, May 1971, the proceedings of which were published as a supplement to *Architecture in Australia* (August 1971) and in publications such as Philip Drew, *The Third Generation: The Changing Meaning of Architecture* (London: Pall Mall, 1972).
  - 3 Sigfried Giedion, *Space, Time and Architecture*, 5th edn. (Cambridge, Mass.: Harvard University Press, 1967), 668. Giedion identified architects concerned with the social dimension of architecture as the 'third generation'. Philip Drew extends this argument in *The Third Generation*.
  - 4 Hannah Lewi and David Nichols, eds., *Community: Building Modern Australia* (Sydney: UNSW Press, 2010), 243. Writing about community buildings in Australia, Lewi describes a "rethinking [of] architecture's ability to express [the] ideas of local community in more humanly engaged ways."
  - 5 Paul Ritter, *Educreation: Education for Creation, Growth and Change* (London: Pergamon Press, 1964).
  - 6 Awarded a RAlA Queensland Chapter citation for meritorious architecture in 1976. See "On-campus buildings are medal winners: Firm hits top with 13<sup>th</sup> award," *Courier Mail*, October 15, 1976. In 1976, RAlA Bronze Medals went to Library Arts Crafts Music and Students Union complex at Mt Gravatt College of Advanced Education designed by Robin Gibson and Partners in association with Works Department and Chemical Engineering Building at Queensland University design by John Andrews International Pty Ltd. Also recognised with a citation was the DDIAE Resource Materials Centre by James Birrell in association with the Public Works Department.

- 7 The Kelvin Grove Halls of Residence is one of only two buildings by Dalton to be listed on the state heritage register. The other is the Plywood Exhibition House by Dalton and Heathwood, designed by Peter Heathwood. The KGHR was awarded a citation for meritorious architecture in 1979. In 1979 Robin Gibson's Art Gallery won the RAI Queensland Chapter Bronze Medal. In 1982 the Kelvin Grove Halls of Residence was awarded a Queensland Chapter Civic Design Award. 'August Village' at Kooralbyn by Harry Seidler and Associates received a commendation in 1982 but was overlooked for the Civic Design award. The Queensland Chapter Bronze Medal winner was the Education Resource Centre Kelvin Grove College of Advanced Education by John Andrews International Pty Ltd. "Top design award for college," *Courier Mail*, October 19, 1979. The Halls of Residence was selected by the Architecture and Design Committee to represent Australian architecture in an exhibition travelling to London, Paris, New York and Los Angeles.
- 8 Bardon Professional Development Centre was recognised with a citation for meritorious architecture in 1977 and the RAI Bronze Medal in 1978 and was demolished in 2014. In 1977 the Bronze Medal was awarded to Lund Hutton Ryan Morton Pty Ltd Townsville Civic Centre Stage 1. *Architecture Australia* (December 1977/January 1978): 29.
- 9 Jennifer Taylor, *Australian Architecture Since 1960* (Sydney: Law Book Company, 1986), 122, 130; *Detailing, National Identity and a Sense of Place in Australian Architecture, UIA International Architect 4* (1985): 52.
- 10 Peter Wicks, *First Decade: A Memoir of DDIAE 1972-1982* (Darling Heights, Qld: TEC Print in conjunction with Community Books Australia, 2009), 16. The director of DDIAE, Lindsay Barker, although an engineer/metallurgist, had a strong commitment to the arts especially the Performing Arts. Wicks describes a backlash against an entirely science and technology based or vocational approach to education.
- 11 Logan and Clarke, *State Education in Queensland*, 14. The Education Act 1964 led to the establishment of the Queensland Institute of Technology in Brisbane in 1965 and its two satellite institutes in Toowoomba and Rockhampton in 1967. The 1970 Education Act Amendment Act introduced a new stream of post-school education throughout Australia giving institutes of advanced education autonomy. Shortly afterwards the DDIAE came under the control of its own council.
- 12 John Dalton Architect and Associates, Department of Works, *Queensland Institute of Technology Darling Downs Art, Craft and Music Teaching Building, Design Report*, undated, unpaginated.
- 13 John Dalton Architect and Associates, *Design Report*, unpaginated.
- 14 Professor Peter Goodall, Dean (Faculty of Arts) and Pro-Vice-Chancellor (Social Justice), writing in "Foreword," *A Block Creative Arts Building* (Toowoomba: University of Southern Queensland, c. 2012), 1, published to celebrate the reopening of the refurbished building.
- 15 John Dalton Architect and Associates, *Design Report*, unpaginated.
- 16 John Dalton Architect and Associates, *Design Report*, unpaginated.
- 17 Letter from Dalton to Robert McGowan, Head, Visual Arts Program, Darling Downs Institute of Advanced Education, School of Arts, August 16, 1979.
- 18 Philip Drew elaborates on the role of the horizontal plane in the work of third generation modern architects: "As an extension of architecture, they assisted in relating the architectural and landscape forms." Drew, *The Third Generation*, 39. The horizontal plane is one of the attitudes identified by Sigfried Giedion in the fifth edition of *Space, Time and Architecture* distinguishing third generation architects from earlier generations. Giedion, *Space, Time and Architecture*, 668.
- 19 Letter from Dalton to Head of Visual Arts, Robert McGowan, August 16, 1979, in which Dalton refers to the "idea of the roof being a carpet of daisy's, flowers, life, health" or at least with "ivy over the walls as [we] requested."
- 20 Paul Walker, "Reassessing John Andrews' Architecture: Harvard Connections," in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open*, ed. Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013), vol. 2, 612. Walker draws attention to this by citing Jennifer Taylor.
- 21 Awarded the Queensland Chapter's Bronze Medal in 1976.
- 22 "On-campus buildings are medal winners," 3.
- 23 Robin Boyd, "The State of Australian Architecture," *Architecture in Australia* 56, no. 3 (June 1967): 454-465. Boyd accuses Australian architects of being 'old-fashioned' and devoid of ideas.

- 24 Letter from Head, Visual Art Program, Robert McGowan to Dalton, August 6, 1979, in which he asserts the significance of the Art, Craft and Music Teaching Building despite its poor maintenance.
- 25 Robert Riddell comment in Jon Voller Oral History Interview, Digital Archive of Queensland Architecture, <http://qldarch.net/beta/#/architect/interview/aHR0cDovL3FsZGFyY2gubmV0L29tZWthL2l0ZW1zL3Nob3cvMTc3NQ==?architectId=aHR0cDovL3FsZGFyY2gubmV0L3JkZi8yMDEyLTEyL3Jlc291cmNlcy9wZW9wbGUvMTE%3D> (accessed February 14, 2015), 14:50.
- 26 Graham Bligh in Oral History Interview, Digital Archive of Queensland Architecture, <http://qldarch.net/beta/#/architect/interview/aHR0cDovL3FsZGFyY2gubmV0L3JkZi8yMDEyLTEyL3Jlc291cmNlcy9wZW9wbGUvNQ%3D> (accessed February 14, 2015), 14:55.
- 27 University House was one of four foundation buildings commissioned from leading local architects for the new campus. Located pivotally at the northern end of the central spine – conceptually the ‘street’ – at its intersection with an east-west axis and is adjacent to the Library and Centre for Learning and Teaching by R. Gibson and Partners. The other projects were by Robin Gibson and Blair Wilson.
- 28 John Dalton Architect and Associates in association with Department of Works Queensland, *In Service Training Centre, Bardon*, undated, unpaginated. Teachers skilled in “chalk-and-talk” modes of teaching would “become skilled in a more fluid and personalized educational philosophy, and in the use of new equipment.”
- 29 John Dalton, *In Service Training Centre, Bardon*, undated, unpaginated.
- 30 Eddie Clarke, *Technical and Further Education in Queensland: A History 1860-1990* (Brisbane: Department of Education Queensland and Bureau of Employment, Vocational and Further Education and Training, Queensland, 1992), 73. 1976 Anderson Report of Apprenticeship (p. 86) increased State responsibilities in apprenticeship training schemes – “to keep under review the adequacy of training not only of apprentices but also of pre-apprenticeships, pre-vocational and adult trainees, train-technicians and other trainees.”
- 31 “Winning house exemplifies Queensland timber and tin tradition: Local Climate influenced construction,” *Courier Mail*, September 15, 1982, 3.
- 32 “Winning house exemplifies Queensland timber and tin tradition,” 3.
- 33 John Dalton Architect and Associates, *Design Report*, unpaginated.
- 34 Courtyards had become common in Dalton’s residential work. The Musgrave (1972), Peden (1972), Covalavich (1975), Chick (1977) and Vice-Chancellor’s Residences (1971) were organised around courtyards.
- 35 Drew, *The Third Generation*, 22.