

## Management of animation Master's theses in Iran: research documentation approach

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**ABSTRACT:** Animation technology is a powerful platform in mass media, communication and education. Progressive developments in technological tools together with expansion of knowledge and skills have resulted in an increase in variety, as well as production speed of modern animation products. Research has shown that animation products are increasingly used in education at different levels and subject areas. Tarbiat Modares is a high ranking university in Iran offering only postgraduate qualifications with an aim to produce qualified academics for the higher education (HE) sector. In this article, developments of HE-level animation teaching level in Iran, and at Tarbiat Modares University in particular, are investigated with special emphasis on analysis of postgraduate project theses using statistical techniques. Areas such as research methods, the role of supervisors, research subject trends, and presentation of outcomes are evaluated and recommendations are made to enhance the quality of training to ensure that graduates are fully qualified, and can in turn utilise animation as an educational tool in other HE subject areas.

### INTRODUCTION

Animation has been presented in human life in a range of forms and throughout the ages where movement and graphics as a strong factor in transferring messages have been realised for a long time. Visual art as a means of enjoyment has encouraged the scientific community to use animation as a vehicle of communication in a range of fields. Methods and skills of production have also increased the attractiveness of this art form in the domain of knowledge transfer, industry and culture, hence, causing considerable attention to be paid to structures and practical application of this field.

The invention of cinematography in 1895 presented an important turning point in production and illustration in a continuous imagery movement. Most of artistic productions by skilled craftsmen and artists, such as Walt Disney were accomplished in the field of animation. The educational programmes to address training needs in terms of knowledge, technique and artistic skills were started [1]. From beginning of the 20th Century in America and Europe and gradually moved into Asia Minor, including Iran since 1961. After a period of inclusion of animation in the subject area of art courses at the postgraduate level, the first BA course in animation started in 1982 and is considered as the foundation of animation education in Iran.

Due to market requirement for technology experts in the field in 1994, an MA degree in animation as a moving image was formed through collaboration between Tarbiat Modares University and All-Russian State University of Cinematography named after S. A. Gerasimov (VGIK) in Moscow, Russia. Around the same time, another Master's degree also become operational at the Art University, Iran. Consequently, the animation subject and its place in the realm of application and education was fully established in graduate studies to develop expertise, as well as research and documentation of growth in scientific and practical activities of the field [2].

### RESEARCH OUTLINE

The substantial market growth for skilled animators in private and state-owned industries, combined with the budgetary considerations in both the cultural and scientific sectors, have necessitated the need for more detailed research into the development of training and education activities. There has been little structured information on which to assess continuous development of the educational process to particularly plan the future strategy.

The current investigation attempts to provide statistical information in this regard by concentrating on final project theses in postgraduate animation courses. All Master's degree theses from 1994 to 2002 at Tarbiat Modares and Art Universities in Iran have been investigated qualitatively and quantitatively to establish trends [3][4]. The widespread use of project management standards for professional competence assessment and development is based on a

rationalistic approach, whereby competence is seen as constituted by a pre-defined set of attributes in the form of knowledge topics [5].

## ANALYTICAL APPROACH

Master's courses in Iran are of minimum two years' duration. For the period from 1994 to 2002, a total of 104 students enrolled in animation Master's courses, of which 94 completed their theses and were awarded the degree. The remaining 10 students withdrew for a variety of reasons. All 94 available theses were carefully evaluated, and for statistical analysis were classified into three main groups of technical-methodical (T-M), theoretical-educational (T-E), and case study-descriptive (C-D). Results are presented in Table 1 and Figure 1.

Table 1: Frequency of theses in classified subjects.

Class	Frequency	%
T-M (technical-methodical)	24	25.5
T-E (theoretical-educational)	51	54.2
C-D (case study-descriptive)	19	20.3
Total	94	100

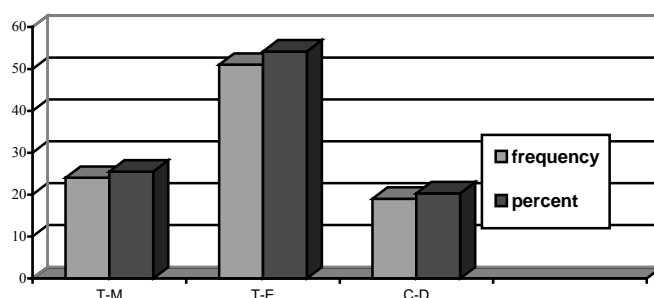


Figure 1: Frequency distribution chart.

As indicated, more than half of the theses were involved with the development of theoretical-educational subjects and only around a quarter concentrated on technical innovations and operations, while the remaining 20% investigated either a specific case study or attended to descriptive aspects of the work.

In the next step, a qualitative tendency index was developed to assess how close each thesis is to the actual subject area of animation as opposed to a general area which also encompasses animation. These categories are identified as animation biased (AB) and general biased (GB). The results of analysis are shown in Table 2 and Figure 2 in percentage terms.

Table 2: Tendency towards specific animation subject.

Class	f	AB (%)	GB (%)
(a) technical-methodical	24	40	60
(b) theoretical-educational	51	45	55
(c) case study-descriptive	19	30	70

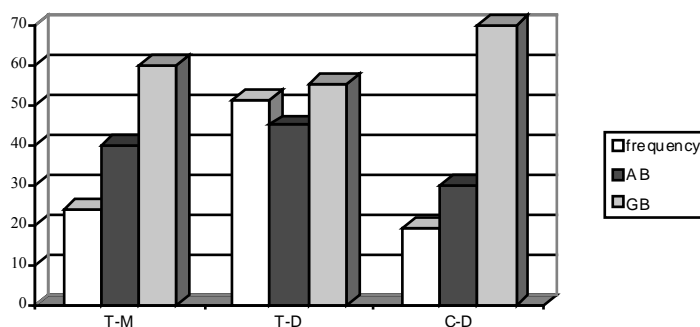


Figure 2: Animation subject tendency of theses.

The data show that only 38% of the theses are biased towards a specific area of animation, whereas 62% are in general areas although reference to animation has been made. The highest level of animation biased tendency is in the

theoretical-educational class with 45%. The worrying aspect, however, is when a case study has been the subject of thesis research yet only 30% of those have actually investigated a specific animation case.

A gender analysis of graduates indicated that 65% of the theses under consideration have been compiled and written by male students against 35% by females as shown in Table 3.

Table 3: The frequency distribution based on gender.

Gender	94-96	97-99	2000-02	Total	% Total
Female	10	9	14	33	35
Male	14	23	24	61	65
Total	24	32	38	94	100

The data also show that although there has been a general increase in both the male and female student populations, as illustrated in Figure 3, there seems to be a higher rate of growth in the number of male students. This is a surprising phenomenon as it would be expected that an art technology programme would attract more female students. More study is required to establish a better understanding of a trend including an investigation of career prospects in respect of gender divide.

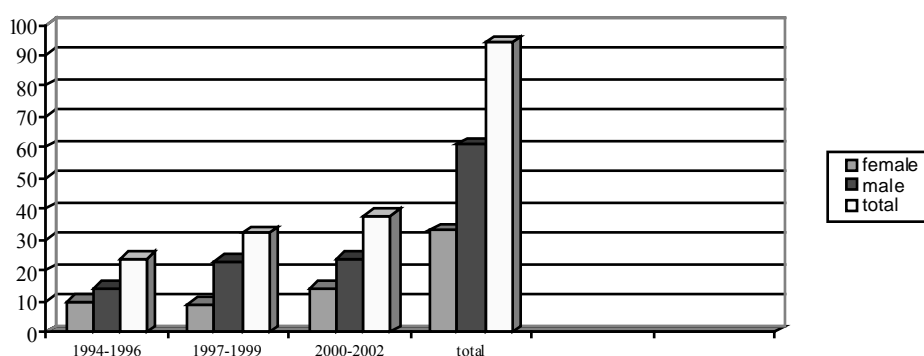


Figure 3: Year on year variation in graduate numbers based on gender.

## QUALITATIVE ASPECTS

This study also investigated the quality of thesis presentation, regardless of the awarded grade, to establish a baseline for future educational development, hence, enhancing the output quality. Several qualitative indicators were considered in order to evaluate the theses in a wide range of categories including the thesis abstract, reference list and citation, comprehensive literature survey and use of sources of information in the bibliography section.

The data show that only 36% of the theses contained a standard abstract as per university guidelines. Some 36% provided long and non-standard summaries normally reproduced from the introduction section of the thesis. The rest either adopted an abstract from one of the reference sources or had no abstract at all. In terms of referencing the sources of information, 94% of theses had a list of references, but only 49% correctly cited the source within the body of the text and used the recommended system.

As reported in Table 1, only 24 out of 94 Master's projects were of a practical nature. However, only 35% of those had a separate section that detailed the practical procedures, equipment and facilities used. The majority only reported the results or product outcomes without paying much attention to process. A closer look at the bibliography section of the theses indicated that more than 72% used original or translated international sources while in the remaining 28%, the listed bibliography came from sources produced locally. This indicates that for such research work, the sources of information have been limited, although were of high quality.

## CONCLUSIONS

This study has shown that research and investigation at the Master's level in the field of animation in Iran covers a wide area due to its rapid expansion. In addition to industrial applications, animation technology can be used as a tool for transferring information at all levels of an educational system. In the analyses presented here, it is clear that investigation in each field of animation is strongly dependant on a number of indicators. These include instruction, technological methods and individual skills and, therefore, a particular attention to compiling and presenting the outcomes helps the development and quality improvement of programmes of study, hence, knowledge-based growth.

The results here show that more than 54% of all Master's animation theses are in theoretical-educational subject areas, which supports the trend for utilisation of animation in the education process. Only 38% of submitted theses were

focused on specific aspects of animation. Project advisors should, therefore, support students in their project planning and management to ensure a much higher content of specifics.

An important element of a research thesis is its structure [6]. The finding of this investigation highlights the need for a more structured and proactive research methodology course to be integrated into the Master's programme to ensure that students pay as much attention to the presentation of their theses, in terms of the abstract, referencing and citation, report structure, etc, as to the main research subject. Students would also benefit from improved English competency to enable them to access and cross reference international information sources.

Finally, it is anticipated that the outcome of this research will contribute to the enhancement of production outputs; thus, benefiting collaboration with Kingston University London in implementation of its technology led teaching in engineering.

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